

SOUTHERN CALIFORNIA



**ASSOCIATION of
GOVERNMENTS**

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Ventura County: Judy Mikels, Ventura County • Glen Becerra, Simi Valley • Carl Morehouse, San Buenaventura • Toni Young, Port Hueneme

Orange County Transportation Authority: Lou Correa, County of Orange

Riverside County Transportation Commission: Robin Lowe, Hemet

Ventura County Transportation Commission: Keith Millhouse, Moorpark

MEETING OF THE

TRANSPORTATION CONFORMITY WORKING GROUP

**Tuesday, September 25, 2007
10:00 a.m. – 12:00 p.m.**

**SCAG Offices
818 West 7th Street, 12th Floor
Riverside A
Los Angeles, CA 90017
213.236.1800**

If members of the public wish to review the attachments or have any questions on any of the agenda items, please contact Jonathan Nadler at 213.236.1884 or nadler@scag.ca.gov

SCAG, in accordance with the Americans with Disabilities Act (ADA), will accommodate persons who require a modification of accommodation in order to participate in this meeting. If you require such assistance, please contact SCAG at (213) 236-1868 at least 72 hours in advance of the meeting to enable SCAG to make reasonable arrangements. To request documents related to this document in an alternative format, please contact (213) 236-1868.

Transportation Conformity Working Group

AGENDA

PAGE #

TIME

- 1.0 **CALL TO ORDER** Brad McAllester, Metro
- 2.0 **PUBLIC COMMENT PERIOD**
Members of the public desiring to speak on an agenda item or items not on the agenda, but within the purview of this committee, must fill out a speaker's card prior to speaking and submit it to the Staff Assistant. A speaker's card must be turned in before the meeting is called to order. Comments will be limited to three minutes. The Chair may limit the total time for comments to twenty (20) minutes.
- 3.0 **CONSENT CALENDAR**
- 3.1 TCWG Minutes of August 28, 2007
Attachment
- 4.0 **INFORMATION ITEMS**
- 4.1 **RTP Update** Naresh Amatya, SCAG 10 minutes
- Schedule
 - Workshops
 - Socioeconomic Data
- 4.2 **RTIP Update** John Asuncion, SCAG 10 minutes
- Attachment
- 4.3 **AQMP Update** SCAQMD, VCAPCD, SCAG 10 minutes
- Discussion of Proposed Goods Movement Control Measures
 - Ventura and Mojave Update
- 4.4 **Projects Requiring Follow-up** TCWG Discussion 30 minutes
- Attachment:
- **RIV031218:** Mid-County Parkway Qualitative PM Hot Spot Analysis
 - **Mission Boulevard Widening** Qualitative PM Hot Spot Analysis
 - **SBD031276:** Ranchero Road PM Hot Spot Analysis Form
 - **ORA120316:** Crown Valley Parkway PM Hot Spot Analysis Form



Transportation Conformity Working Group

AGENDA

	<i>PAGE #</i>	<i>TIME</i>
▪ SBD35556: Victorville PM Hot Spot Analysis Form		
4.5 <u>Review of PM Hot Spot Interagency Review Forms Attachment</u>	TCWG Discussion	40 minutes
5.0 <u>CHAIR'S REPORT</u>		5 minutes
6.0 <u>INFORMATION SHARING</u>		5 minutes
7.0 <u>ADJOURNMENT</u>		

The next meeting of the Transportation Conformity Working Group will be on Tuesday, October 23, 2007 at the SCAG office in downtown Los Angeles.

3.1 MINUTES

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THE FOLLOWING MINUTES ARE A SUMMARY OF THE MEETING OF THE TRANSPORTATION CONFORMITY WORKING GROUP. AN AUDIOCASSETTE TAPE OF THE ACTUAL MEETING IS AVAILABLE FOR LISTENING IN SCAG'S OFFICE.

The Meeting of the Transportation Conformity Working Group was held at the SCAG office in Los Angeles.

In Attendance:

Abrishami, Lori	Metro
Alvarez, Grace	RCTC
Gutierrez, Jose	LA City-EAD
Lobeck, Ken	RCTC
McAllester, Brad	Metro
Mitchell, Miles	LA City-DOT
Poe, Lisa	SANBAG
Van Hagen, Tony	Caltrans District 7
Williams, Leann	Caltrans

SCAG Staff

Amatya, Naresh	
Asuncion, John	
Ayala, Rosemary	
Mann, Betty	
Nadler, Jonathan	
Sherwood, Arnie	SCAG, ITS UC Berkeley
Whiteaker, Warren	

Via Teleconference:

Adams, Cindy	Caltrans
Bechtel, Cathy	RCTC
Brady, Mike	Caltrans Headquarters
Cacatian, Ben	Ventura County
Devitas, Rodney	Caltrans Headquarters
Fagan, Paul	Caltrans District 8
Johnson, Sandy	Caltrans District 11
Jones, Matt	Mestre Greve Associates

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Knox, Michelle	FHWA
Lay, Keith	LSA& Associates
Louka, Tony	Caltrans District 8
Mazur, Jean	FHWA
Modrek, Laleh	Caltrans District 8
Wade, Dennis	ARB
Yoon, Andrew	Caltrans District 7

1.0 CALL TO ORDER

Jonathan Nadler, SCAG, called the meeting to order at 10:07 a.m.

2.0 PUBLIC COMMENT PERIOD

There were no comments.

3.0 CONSENT CALENDAR

3.1 Approval Item

3.1 TCWG July 24, 2007 Meeting Minutes

A MOTION was made to MOVE the minutes. The MOTION was SECONDED and UNANIMOUSLY approved.

4.0 INFORMATION ITEMS

4.1 RTP Update

Naresh Amatya, SCAG, stated that staff will bring the draft RTP to SCAG's Transportation & Communications Committee (TCC) on November 1 with a recommendation to release the draft for the public review and comment period.

Over the past months staff has updated the RTP project list based on information received from the CTC's. Staff has performed preliminary model runs for the base year and the 2035 horizon year. The different scenarios focus on projects that are committed in the CTC's long range

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plans and on using revenue backed projects or public/private financed projects. Staff is currently trying to assess conformity implications of the scenarios. Staff has also done preliminary baseline revenue forecasts based on the work completed to date. Staff estimates 240 billion dollars to be the revenue based on existing and available sources. Cost is also based on the operating and maintenance needs for the existing system. All the committed cost through the TIP and other funding mechanisms also comes close to 240 billion dollars. The RTP will look at other mechanisms of funding, including increasing the gas tax and public/private partnership to put forth additional projects in the plan.

SCAG will be holding five RTP workshops over the next few months. The first workshop is on August 30th at the Transportation & Communications Committee. The focus of the workshop will be Transportation Finance. The second workshop will held on September 20th in Long Beach with a focus on goods movement. The third workshop will be held on October 4th at the SCAG office in downtown L.A. The focus of the workshop will be the growth scenario and will also include a session on SCAG's Regional Comprehensive Plan. The fourth workshop will be held on October 18th in Ontario with a focus on airport ground access and high speed rail. The fifth workshop will be will be a wrap-up session and will be held on October 25th in Anaheim.

Staff hopes to bring the draft RTP to the Regional Council in February 2008 for adoption.

Jonathan Nadler, SCAG, added that in terms of the attainment demonstration the South Coast AQMD, the South Coast Air Basin, is a PM2.5 non-attainment area. This is the only area in the SCAG region that is non-attainment. The AQMD strategy in putting forward an AQMP to be submitted to ARB was to a combined PM2.5 and ozone strategy. Having done that there was a certain amount of NOx reductions that were unidentified in terms of attaining the PM2.5 standard. The AQMD had suggested to ARB certain measures for ARB's adoption to cover the shortfall. There is a September 27th ARB hearing on the State Strategy and the South Coast air plan for ozone and PM2.5.

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Jean Mazur, FHWA, stated that the FHWA would be more comfortable if the timely implementation report came with the RTP and the same one can be used for the new '08 TIP. Jonathan Nadler stated that staff would take that into consideration.

4.2 RTIP Update

John Asuncion, SCAG, informed the committee that staff was currently analyzing RTIP Amendment #10 submittals. Staff anticipates submitting Amendment #10 to Caltrans by mid-September. Staff then anticipates State approval in October, and federal approval by November.

Rosemary Ayala, SCAG, stated that staff anticipates getting the existing amendment out in September and there should be time for a smaller type amendment prior to receiving the 2008 County TIPS in early December. After that the region would then go into emergency amendment basis so the region does not lapse any funds or delay any project implementation at the various levels that require an amendment.

On October 4th, staff will request that the TCC recommend Regional Council approval of the final 2008 RTIP Guidelines.

Jonathan Nadler stated that in regards to the TIP Guidelines, the committee had previously requested that there be some type of clarity regarding requirements for modeling. Staff has been attempting to get agreement on definitions and modeling guidelines so that there is consistency among the various agencies staff who work on these projects such that we do not run into problems with the federal approval at the last minute. Part of the issue is that there may be different definitions regarding projects being used by someone who is considering conformity as compared to someone who is programming the project. Some examples of projects being considered are arterial gap closure, gap widening, extend arterial right turn lanes, extended entry/exit ramp, accelerate/de-acceleration lanes, mainline ancillary lanes, HOV preferential lane on entry ramps, and adding lanes on ramps.

Ken Lobeck, RCTC, stated that as part of the environmental sign-off there is the conformity sign-off portion. The review of that is looking for consistency between the RTIP and the project report in description and

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modeling details. What has not been provided in the past is verification of what is actually modeled and how was it modeled.

Jonathan Nadler stated that staff would like to see guidance on this issue in the RTIP Guidelines. Worst case scenario, however, is that the guidance could be in another paper. Since there is still the opportunity to get the guidance into the RTIP, staff will continue the discussion with the TCWG.

Jean Mazur felt it would be beneficial to put something in writing for review. Jonathan Nadler stated that the information will be written up and brought back to the group.

4.3 NEPA Delegation

Cindy Adams, Caltrans, described NEPA delegation set forth in SAFETEA-LU relative to conformity.

In general, Section 6004: State Assumption of Responsibility for Categorical Exclusions (CE), assigns the State responsibility for determining whether certain designated activities are categorically excluded from requirements for environmental assessments or environmental impact statements. Where there are CE's that are assigned under Section 6004, Caltrans is assuming responsibility for air quality conformity determination.

Under Section 6005: Surface Transportation Project Delivery Pilot Program, Caltrans is assigned the responsibilities for environmental review, consultation, or other actions pertaining to the review or approval of a specific project, but is not assigned the responsibility for conformity determinations. FHWA will continue to make air quality determinations for 6005 projects.

FHWA sent a letter to Caltrans in June which describes the information that they need to receive in order to make a conformity determination. Caltrans is currently in the process of working out in practice how it will be getting out information back and forth to FHWA. Caltrans is also in the middle of putting together an annotated outline of conformity information. Caltrans is still working with the districts to have them identify their points of contract

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for project level air quality conformity as opposed to regional air quality conformity.

Jean Mazur, FHWA, reminded the TCWG that FHWA is asking that the formal request for the conformity determinations for 6005 projects come through Caltrans local assistance rather than the project sponsors sending them directly to FHWA.

4.4 Review of Qualitative PM Hot Spot Analysis

Mid-County Parkway: RIV031218

Jean Mazur, FHWA, was primarily concerned with the vehicle threshold. The report quantified a 10,000 vehicle threshold, which she stated was an incorrect value.

Additionally, Ms. Mazur was concerned with the location of the monitoring stations. Mr. Lay stated that there were 2-3 monitors in the 32 miles of the project area. There is no real monitor that is adjacent to a similar facility that can be found in the area. The monitoring locations that do exist in the area currently exceed the threshold. Three separate stations were reported in the study; however, only two were used for each of the pollutants. For PM2.5 those were the Riverside-Rubidoux and the Riverside-Magnolia stations. The PM2.5 were exceeded in all years for both those stations, but based on predicted future concentrations from the data it shows that the PM2.5 concentrations should be met in the area by 2011. For PM10, the stations in the area are Riverside-Rubidox and the Perris stations. There have been no exceedance reports for the national 24-hour standard in the last 6 years.

Ms. Mazur stated that she would expect to see in the study what transportation facility is closest, how close it is to the monitors, and what the ADT in that facility is to support that these are the monitors that are most representative of the project as built.

Mr. Lay stated that within the study on page 29, under the data considered, it was stated that the monitoring stations are located in Riverside County

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within the vicinity of state Route 60, state Route 91 and I-215, so they are adjacent to fairly large facilities with high truck traffic volumes. The facility will not be a major truck facility; it is primarily a commute facility. The truck volumes will be less than 5% so the concentrations from the facility should be less than what is projected from the monitoring stations. But there are no stations in the Riverside County area that would be adjacent to a similar facility.

Mr. Lay stated that the road network in the area will be operating at a very poor level of service. It is operating from a C-F at the majority of the intersections in the project area. With the project that will improve to A-D. The traffic will flow a lot better in the area it will just be concentrated on one facility instead of multiple facilities.

Mike Brady stated that there was a situation that without the project there is very high emissions from the surrounding road network because there is a very poor level of service. With the project there will be more traffic with the total system but it should be operating better. The question is, will this result in lower emissions within the nearby corridor? How much traffic is being taken off the parallel streets? Given this, do we develop an analysis that supports the conclusion that the project will not make the situation worse overall.

Cathy Bechtel, RCTC, stated that the administrative draft was currently being worked on and parts of it are being reviewed by Caltrans and the other federal agencies. RCTC will continue working with all the partner agencies on finalizing the draft and plan to release the draft environmental document out for public review in January 2008.

The TCWG acknowledged that the final determination of the adequacy of this analysis could not be made today without the input of EPA.

Regarding Ranchero Road, SBD031276, it was determined that the analysis provided was intended to be background material for the PM hot spot form submitted for this month's review; it was not intended to be a qualitative analysis.

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Mr. Lay inquired if the two projects, ORA120316 and SBD35556, that had been brought up at the last meeting of the TCWG were reviewed by Caltrans and EPA but not FHWA and are listed as pending in the meeting minutes posted on SCAG's website.

Tony Louka stated that he had contacted Jean Mazur, FHWA, and asked her not to approve.

Jean Mazur stated that she would check on ORA120316.

4.5 Review of PM Hot Spot Interagency Review Forms

Ranchero Road, SBD031276

Jonathan Nadler, SCAG, announced that because of the lack of representation by the EPA at today's meeting, the PM Hot Spot reviews determined today will be tentative pending review and determination by EPA:

Matt Jones, Mestre Greve Associates, stated that his agency originally did the analysis before the most recent PM10 Guidance came out. The report was a review of the project and was supposed to be attached to the form. What is in the report analysis is the old UC Davis protocol. There is a 50 page backup to the inter-agency review form.

Tony Louka, FHWA, added that the qualitative assessment was done on the old method and the new report reflects the new method and deems it not a project of air quality concern. Nor is there any change in the project that was covered the older UC Davis study and the new study, it is the same project.

Mike Brady, Caltrans, stated that the issue with the review is on the form, it has no ADT information. It is all done in terms of level of service and peak hour delay which is not particularly relevant to the decision.

Jonathan Nadler then stressed the importance that the project sponsors who submit the review forms to SCAG look for the basic information, because if the basic information is not on the form staff will have trouble processing it.

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Mike Brady then stated that if the study was done before March 2006 the committee should be able to say that the old procedure holds and go forward with it as long as there are no changes to the project.

Jonathan Nadler requested that Tony Louka forward to Mike Brady and Jean Mazur the ADT because the data needed to be documented.

4.6 AQMP Update

Eyvonne Sells, AQMD, stated that the South Coast AQMP was discussed earlier on in the discussions and there was nothing more new to report.

Ben Cacatian, Ventura County, stated that it is still waiting for its modeling and attainment demonstration that ARB is working on that though they have not given any indication of when it will be completed. SCAG has been working with ARB and the air districts for Ventura County and Mojave and Antelope relative to the emission budgets. Ventura has not heard if the ARB is requesting any additional information from SCAG on the conformity budgets. Dennis Wade, ARB, responded that the agency was going to put a call into SCAG this afternoon to talk about the budgets.

Last month it was reported that Ventura was anticipating the October Board meeting to adopt their AQMP, but it appears that there will not be a Board meeting in October. Consequently, it looks like adoption would take place at the earliest in November. This also depends if the modeling will be completed for the plan. It was also reported last month that Ventura was looking at Severe 15 ozone designation. It appears to be up in the air again between Severe 15 and Serious classifications which should be clearer as the modeling gets completed.

Jonathan Nadler stated that Antelope and Mojave were in the same circumstance in terms of ARB assisting them in putting together the plan. For Mojave/Antelope the South Coast Air Basin is a major factor considering the transport of emissions there from the South Coast. Mojave's plan will likely come along once the South Coast plan is adopted.

Jonathan Nadler also reported on the Goods Movement Control Measures that have been in discussion. SCAG is working with the commissions and

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others on any potential measures or strategies that could be brought forward in both short and long term to help the region move to attainment with both PM2.5 and 8 HR Ozone. The MTA brought an item to its board updating them on where the process is at and requesting that SCAG works closely with the MTA. RCTC brought similar item to their board.

4.7 Regional Comprehensive Plan (RCP)

Warren Whiteaker, SCAG, stated that the RCP presents a vision of how the six counties within the SCAG region can balance resource conservation, economic vitality, and quality of life. It lays plan for framework for achieving sustainability in the following nine areas. The areas are: economy, air quality, energy, land use and housing, open space and habitat, security and emergency preparedness, solid waste, transportation, and water. The RCP demonstrates how growth and infrastructure challenges can be approached comprehensively by building off the growth management framework of the Compass Blueprint efforts as well as other smart growth efforts that are going on throughout the region.

The RCP will spell out measurable targets that can be used to gauge the region's progress for reaching sustainability. Additionally, it a focus on getting the best policies and practices that will get the region the best end result for its money.

Through it is non-binding recommendation, the RCP calls on federal, state, regional, local governments, conservations organizations, developers and other stakeholders to begin a regional dialog that will lead to coordinated action. SCAG is especially suited for working on sustainability policies that require local consent and cooperation as its role as a council of governments as well as from an MPO perspective.

The RCP is on the same schedule as the RTP with a draft being released in November. This will complete a three year process to develop the plan. The plan going forward is that the RCP and the RTP get updated on a regular four-year cycle building off the SAFETEA-LU additional time period.

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5.0 CHAIR’S REPORT

No new items to report.

6.0 INFORMATION SHARING

Jonathan Nadler announced that SCAG would hold an Environmental Justice Workshop in the near future and would advise the TCWG of the details.

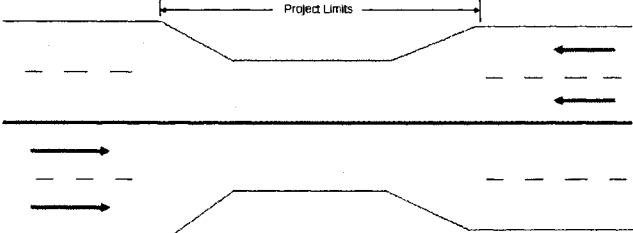
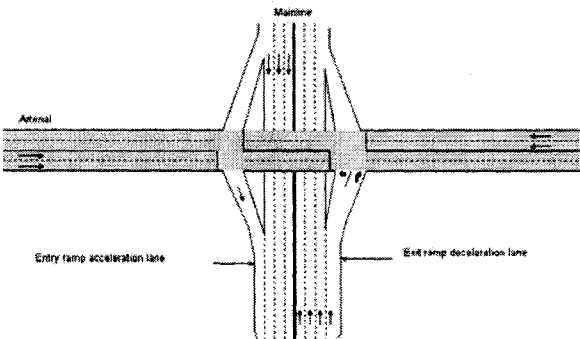
7.0 ADJOURNMENT

Chair McAllester adjourned the meeting at 11:55 a.m.

The next Transportation Conformity Working Group meeting will be held on Tuesday, September 25, 2007 at the SCAG office in Los Angeles.

4.2 RTIP ATTACHMENT

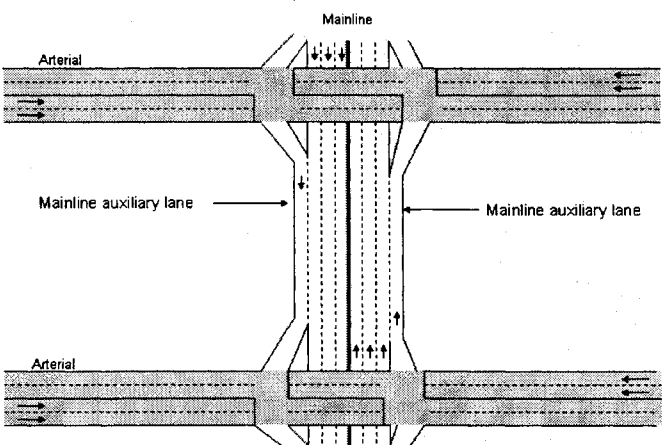
2008 RTIP Unique Project Modeling Scenarios

Project Type: Arterial Gap Closure Widening Project		
Description	An arterial widening project where each side of the arterial outside of the project limits is already widened to the number of through lanes that the gap widening portion will accomplish	<p>Project Scenario: Arterial Gap Closure Widening Project Examples: Widen from 2 to 4 through lanes or 4 to 6 through lanes</p> 
Programming Conformity Status	Non exempt, capacity enhancing project	
Submit for Modeling?	Yes	
<p>Programming Reminder Notes: The widening segment length is not relevant in determining if the project is exempt or non exempt. Regardless of the gap closure segment length, the project should be considered a capacity enhancing project and should be submitted into the RTIP with the required modeling details.</p>		<p>Required Modeling Details: <u>Within the gap closure project limits:</u> <ul style="list-style-type: none"> • Gap closure project segment length • Existing number of through lanes in each direction • Existing total number of through lanes • Improvement number of through lanes in each direction • Improvement number of total through lanes • Project exhibit diagram <u>Outside the project limits:</u> <ul style="list-style-type: none"> • Existing number of through lanes in each direction before and after project limits • Existing total number of through lanes before and after project limits </p>
Project Type: Extended IC Ramp Acceleration/Deceleration Lanes		
Description	An IC improvement project that includes modifications to existing ramps and/or new ramps that are significantly extended.	<p>Project Scenario: Extended Entry/Exit Ramp Acceleration/Deceleration Lanes Example: IC Improvement that includes an extended entry ramp acceleration lane and/or an extended exit ramp deceleration lane</p> 
Qualifying Notes	The IC ramp acceleration/ deceleration lane(s) should terminate at the mainline and not extend to the next IC. If they do, then the lane(s) is now an auxiliary lane. The ramp extension also should only be a reasonable length and generally not exceed a ¼ mile in length.	
Programming Conformity Status	SCAG model can include the ramp changes.	
Submit for Modeling?	Yes	
		<p>Required Modeling Details:</p> <ul style="list-style-type: none"> • Ramp length from the arterial to termination at the mainline • Type of ramps, mixed flow or HOV exclusive • Existing and proposed number of lanes • Project exhibit diagram

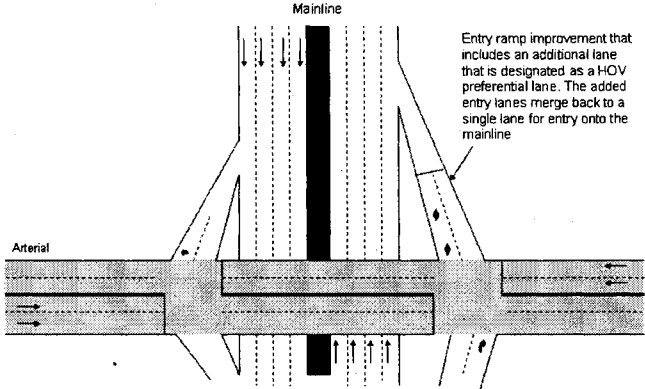
Programming Reminder Notes:

Identifying the extended ramp as an acceleration/deceleration lane or an auxiliary lane needs to occur at an early PDT. There also are scenarios where the extended ramp could be of sufficient length to make the project a capacity enhancing project. Because the SCAG model has the capability to model ramps, and most IC improvement projects will include ramp widening, treat the IC extended ramp or acceleration/ deceleration lane as a scope element that requires modeling.

Project Type: Mainline Auxiliary Lanes

<p>Description</p> <p>Programming Conformity Status</p> <p>Submit for Modeling?</p>	<p>An added lane on the outside of a freeway that extends only from the onramp(s) of one IC to the off-ramp(s) of the next. A lane that extends all the way through an IC is not an auxiliary lane, but a through lane and should be modeled as a capacity enhancing project.</p> <p>Non exempt capacity enhancing project</p> <p>Yes</p>	<p>Project Scenario: Mainline Auxiliary Lanes Example: Auxiliary lanes added between two ICs that begin at the end of the entry ramp and terminate at the next IC's exit ramp</p>  <p>Required Modeling Details:</p> <ul style="list-style-type: none"> • Type of auxiliary lane (e.g. mixed flow lanes) including the locations of the beginning and end points • Length and number of lanes • Project exhibit diagram <p>Added Details:</p> <ul style="list-style-type: none"> • Since the auxiliary lane will be modeled, it needs to be included in the project description as one of the major scope elements
<p>Programming Reminder Notes: The Conformity Rule does not exempt auxiliary lanes from air conformity modeling requirements. Since an auxiliary lane and an acceleration/deceleration lane are close in design and scope, an effort should be made at an early PDT meeting to clearly differentiate if the added lane is an auxiliary lane or an acceleration/deceleration lane. Adding a lane to a freeway is considered regionally significant and needs to be included in the regional modeling analysis. Until a formal definition for a minimum length of an auxiliary lane can be determined, there is no minimum length for an auxiliary lane. The lane should be treated as a capacity enhancing project and submitted with all required modeling details.</p>		

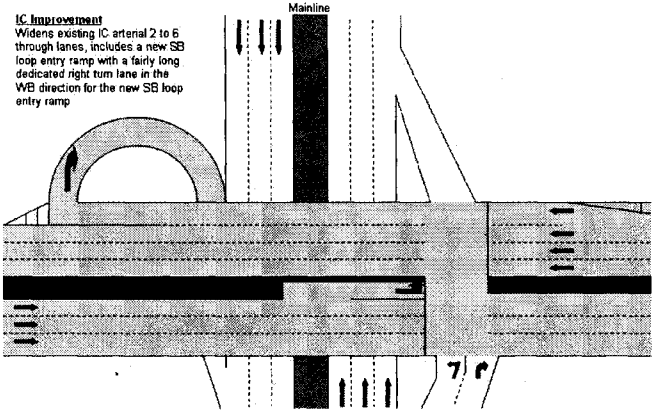
Project Type: IC Entry Ramp Widening That Include a HOV Preferential Lane

<p>Description</p>	<p>An IC improvement project that includes entry ramp widening where one of the added entry ramp lanes is designated to be a HOV preferential lane. The added HOV lane is assumed to terminate prior to the mainline and is not a HOV direct connector. The added entry ramp lanes also are assumed to merge back to a single lane for entry onto the mainline</p>	<p>Project Scenario: HOV Preferential Lane on an Entry Ramp Example: An IC widening improvement project that widens the entry ramps 1 to 2 lanes and includes 1 HOV preferential lane with no direct HOV connector on the mainline</p>  <p>Entry ramp improvement that includes an additional lane that is designated as a HOV preferential lane. The added entry lanes merge back to a single lane for entry onto the mainline</p>
<p>Programming Conformity Status</p>	<p>In this scenario, the ramp improvement normally would be considered exempt from regional modeling analysis. HOWEVER, the SCAG model has the capability to model the ramp improvements and should be considered capacity enhancing from a programming and modeling perspective. Submit with all required modeling details.</p>	<p>Required Modeling Details:</p> <ul style="list-style-type: none"> • Existing number of ramp lanes • Improvement number of ramp lanes • Identification of the HOV preferential lane • Clarification that the added lanes merge back to a single lane for entry onto the mainline • Project exhibit diagram <p>Added Details:</p> <ul style="list-style-type: none"> • The HOV preferential lane needs to be included in the project description as a major scope element
<p>Submit for Modeling</p>	<p>Yes</p>	<p>Programming Reminder Notes: Currently, the HOV preferential lane will be modeled as a standard mixed flow lane. <u>The HOV lane also needs to be called specifically in the RTIP project description</u> as a major scope element. In this scenario, the added entry ramp lanes are assumed will merge back to a single lane for entry onto the mainline. If the entry lane improvement appears to include a significant extension, the lane now could be viewed also as an acceleration lane and the modeling details should address the added length. Clarification of the lane needs to be addressed at an early PDT meeting to ensure the correct modeling details are submitted.</p>

Project Type: An IC Improvement with Exit and/or Entry Ramp Lane Widening

<p>Description</p>	<p>An IC improvement project that includes exit and/or entry ramp lane widening. The added exit ramp lane(s) provides additional turning lanes at the arterial. There is no change to the exit ramp lane off the mainline.</p> <p>The entry lane improvement adds one or more entry lanes at the arterial. The lanes merge back to a single lane or the existing lane configuration for entry onto the mainline. There are no added lanes beyond the mainline gore point.</p>	<p>Project Scenario: Adding Lanes on to Ramps Example: An IC widening improvement project that widens the exit and entry ramps 1 to 2 lanes.</p> <p>Required Modeling Details:</p> <ul style="list-style-type: none"> • Existing number of ramp lanes • Improvement number of ramp lanes • Clarification that the added lanes merge back to a single lane for entry onto the mainline for the entry lanes and there is no change at the mainline gore point for the exit lane • Project exhibit diagram <p>Added Details:</p> <ul style="list-style-type: none"> • Include the ramp lane change in the project description (e.g. Widen SB Exit Ramp from 1 to 2 lanes)
<p>Programming Conformity Status</p>	<p>These types of improvements would be considered exempt from regional modeling. HOWEVER, since the SCAG model has the ability to model ramp improvements, treat as a capacity enhancing, non exempt improvement and submit with all required modeling details.</p>	
<p>Submit for Modeling?</p>	<p>Yes</p>	
<p>Programming Reminder Notes: If the entry ramp includes an HOV preferential lane, then see the HOV ramp lane project type section. If the ramp improvements will extend the lane or add lanes at or beyond the mainline gore point, then the improvement is no longer a channelization improvement, but now capacity enhancing. Review the Ramp Acceleration/Deceleration and/or Auxiliary Lane section to determine if the project now falls into this category as well. Discuss and resolve any ramp improvement questions at an early PDT to ensure the modeling details are correctly submitted.</p>		

Project Type: Extended Arterial Right-Turn Lanes

<p>Description:</p> <p>Programming Conformity Status</p> <p>Submit for Modeling?</p>	<p>An IC improvement that widens the number of arterial through lanes and includes an extended dedicated right-turn lane. The extended right turn-lane would terminate at the entry ramp.</p> <p>Exempt, non capacity enhancing improvement element</p> <p>No</p>	<p>Project Scenario: Extended Arterial Right-Turn Lanes Example: IC improvement that includes an extended arterial right-turn lane</p>  <p>IC Improvement Widens existing IC arterial 2 to 6 through lanes, includes a new SB loop entry ramp with a fairly long dedicated right turn lane in the WB direction for the new SB loop entry ramp</p> <p>Mainline</p> <p>Required Modeling Details:</p> <ul style="list-style-type: none"> • Not applicable
<p>Programming Reminder Notes: No clear guidance currently exists for these type of lanes. Since the lanes are not through lanes, they appear to function more as channelization improvements. The lanes should not be counted as part of the through lane scope improvement. However, including the extended right-turn lane in the project description is recommended to ensure the scope element is identified.</p>		

4.4 PROJECTS REQUIRING FOLLOW-UP

- **RIV031218:** Mid-County Parkway
Qualitative PM Hot Spot Analysis
- **Mission Boulevard Widening**
Qualitative PM Hot Spot Analysis
- **SBD031276:** Ranchero Road
PM Hot Spot Analysis Form
- **ORA120316:** Crown Valley Parkway
PM Hot Spot Analysis Form
- **SBD35556:** Victorville PM Hot Spot
Analysis Form

AIR QUALITY STUDY

MID COUNTY PARKWAY

PM_{2.5} AND PM₁₀ ANALYSES

08-RIV-KP 0.0/51.0 PM 0.0/31.7
EA No. 08-0F3200

Submitted to:

State of California
Department of Transportation, District 8
464 West 4th Street
San Bernardino, California 92401-1400

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INTRODUCTION

LSA Associates, Inc. (LSA) prepared this Air Quality Technical Addendum for the Mid County Parkway (MCP) project in response to the United States Environmental Protection Agency (EPA) releasing new PM_{2.5}¹ and PM₁₀² hot-spot analysis requirements in its March 10, 2006, final transportation conformity rule (71 FR 12468) (Final Rule). The 2006 Final Rule supersedes the Federal Highway Administration's (FHWA) September 12, 2001, "Guidance for Qualitative Project-Level Hotspot Analysis in PM₁₀ Nonattainment and Maintenance Areas." This technical addendum was conducted following the procedures and methodology provided in the "Transportation Conformity Guidance for Qualitative Hot-Spot Analyses in PM_{2.5} and PM₁₀ Nonattainment and Maintenance Areas" (EPA/FHWA Guidance) (EPA, 2006a) developed by the EPA and the FHWA.

This PM_{2.5} and PM₁₀ analysis addresses the construction of the MCP project, including the following components identified in the Regional Transportation Plan (RTP) and the Regional Transportation Improvement Program (RTIP): Project ID: RIV031218, CETAP – Mid County Parkway Corridor: complete environmental work/route alternatives (Phases 1 and 2) from State Route 79 (SR-79) in the east through Lake Mathews and Mead Valley to Interstate 15 (I-15).

PROJECT LOCATION AND DESCRIPTION

The Riverside County Transportation Commission (RCTC), in cooperation with the California Department of Transportation (Caltrans) District 8, the County of Riverside, the City of San Jacinto, the City of Perris, and the City of Corona, proposes to construct the Mid County Parkway (MCP), a new highway project in Riverside County, California. The project area is in western Riverside County, primarily along or parallel to the existing Cajalco Road and the Ramona Expressway. Figure 1.1 depicts the MCP study area and the regional location of the project. The MCP study area is approximately 51 kilometers (km) (32 miles [mi]) long and ranges from 1.7 to 8.3 km (1 to 5 mi) wide.

The MCP will serve as a major east-west connection in western Riverside County and will also provide for regional movement to eastern Riverside County, Los Angeles County, and Orange County. The proposed action would adopt an MCP alignment and construct a major, limited-access transportation parkway to meet current and projected 2035 travel demand from Interstate 15 (I-15) on the west to State Route 79 (SR-79) on the east.

PURPOSE AND NEED

The purpose of the proposed action is to provide a transportation parkway that will effectively and efficiently accommodate regional east-west movement of people and goods between and through San Jacinto, Perris, and Corona. More specifically, the selected alternative will:

- Provide increased capacity to support the forecast travel demand for the 2035 design year
- Provide a limited access parkway

¹ Particulate matter less than 2.5 microns in diameter.

² Particulate matter less than 10 microns in diameter.

Figure 1.1: Project Vicinity and Study Area

- Provide roadway geometrics to meet State highway design standards
- Accommodate the Surface Transportation Assistance Act (STAA) National Network for oversized trucks
- Provide a parkway that is compatible with a future multimodal transportation system

The Mid County Parkway is located in an area of western Riverside County that is undergoing substantial population and employment growth. The population in Riverside County overall is expected to double between 2000 and 2030 from 1.5 million to 3.1 million.¹ The population in western Riverside County is expected to increase by over one million people between 2000 and 2025, an increase of more than 85 percent. Growth in employment is expected to occur at an even higher rate, with an increase of over 115 percent in the number of jobs.² Although currently funded transportation improvements will address some of the projected future demand, additional transportation improvements are needed to provide for the efficient movement of goods and people in the future.

Traditionally, western Riverside County has served as a population center of individuals commuting to Orange and Los Angeles Counties, resulting in high levels of east-west travel demand. In addition to the rapid population growth in these communities, land planning and economic projections indicate that the Perris/Moreno Valley/March Air Reserve Base area will serve as a major distribution hub for goods in the Inland Empire.³ This employment center will result in increased travel demand by commuters, as well as by trucks carrying goods in and out of the area.

PROJECT ALTERNATIVES

Segment Descriptions

The MCP alternatives are composed of various segments, (Figures 1.2a and 1.2b). An alternative is one possible east/west route between I-15 on the west and SR-79 on the east. Many of the alternatives share common segments. To organize data collection and analysis for the MCP Alternatives and to reduce redundancy resulting from the many common segments, data were collected and tabulated for the project technical reports by segment. There are 17 segments and design variations in the current build alternatives, all of which are listed and summarized below. Some of the segments are described as design variations although they are used to replace a segment or a portion of a segment. A description of the beginning and end points is provided below for each of the 17 segments. Most segments run in an east-west direction, although a few run north-south. Distances are approximate.

Temescal Wash Area with Collector Distributor (CD) Roads (TWS-C). The Temescal Wash Area with Collector Distributor (CD) Roads (TWS-C) Segment begins at the western terminus of the MCP and ends 250 meters (m) (840 feet [ft]) east of the Temescal Canyon Road/Cajalco Road intersection.

¹ Source: 2004 Regional Transportation Plan, Southern California Association of Governments.

² Source: 2004 Regional Transportation Plan, Southern California Association of Governments.

³ For example, the March Air Reserve Base Land Use Plan in the Riverside County General Plan (adopted 2003) provides for 9.7 million square feet of industrial build out capacity and 5.1 million square feet of commercial build out capacity.

Figure 1.2a: Study Area Segments

Figure 1.2b: Study Area Segments

This segment includes portions of I-15 north and south of the existing I-15 interchange at Cajalco Road and east and west of I-15 in the vicinity of existing Cajalco Road. This segment extends approximately 3,140 m (10,300 ft) south of the existing Cajalco Road, approximately 3,500 m (11,600 ft) north of existing Cajalco Road, approximately 2,150 m (7,050 ft) west of I-15, and approximately 975 m (3,200 ft) east of I-15. The alignment remains south of existing Cajalco Road to 250 m (840 ft) east of the Temescal Canyon Road/Cajalco Road intersection. The CD roads will extend from Weirick Road to Ontario Avenue. The MCP mainline crosses over the I-15. Circulation improvements include the addition of through lanes for capacity enhancement at both the northbound and southbound ramp interchanges for Ontario Avenue/I-15, the widening of Ontario Avenue between the I-15 on and off-ramps, and the addition of one lane to both the northbound on- and off-ramps. In addition, the Cajalco Road/I-15 interchange will undergo an operational improvement to replace the existing two-lane overcrossing with a new six-lane overcrossing. The improvement will close a gap between four- and six-lane sections of Cajalco Road on either side of the parkway and specifically widen Cajalco Road from two to four lanes from Temescal Canyon Wash to Bedford Canyon Wash and widen the ramps from one to two lanes.

Lake Mathews South (LMS). The Lake Mathews South (LMS) Segment begins at the eastern terminus of the TWS-C Segment, south of existing Cajalco Road at the Temescal Canyon Road/Cajalco Road intersection, and proceeds east through predominantly vacant land (primarily habitat reserve lands owned by either the Riverside County Habitat Conservation Agency [RCHCA] or the Metropolitan Water District of Southern California [Metropolitan]) remaining south of existing Cajalco Road. It connects with the Mead Valley (MV) Segment approximately 789 m (2,590 ft) east of El Sobrante Road. A two-way frontage road is proposed directly adjacent to the south side of the new parkway to capture local traffic approaching from the south. This frontage road starts west of Lake Mathews Drive and ends at the MCP/El Sobrante Road interchange.

Lake Mathews North General Plan (LMN-GP). The Riverside County General Plan Circulation Element proposes an urban arterial¹ north of Lake Mathews. The Lake Mathews North General Plan (LMN-GP) Segment proceeds from the Temescal Canyon Road/Cajalco Road intersection along a new alignment north to where it connects to El Sobrante Road at its intersection with La Sierra Avenue. From La Sierra Avenue, the LMN-GP Segment follows the existing alignment of El Sobrante Road north of Lake Mathews, connecting to the MV Segment 789 m (2,590 ft) east of the El Sobrante Road and Cajalco Road intersection. This segment is a four-lane urban arterial with local intersections throughout its entire length. Changes to existing conditions within this segment include realignment of a portion of existing Cajalco Road from 1,038 m (3,407 ft) west of Mockingbird Canyon to 682 m (2,240 ft) east of Mockingbird Canyon.

¹ An urban arterial is a highway primarily for through-traffic where anticipated traffic volumes exceed four-lane capacity. Access from other streets or highways shall be limited to approximately one-quarter mile intervals. Source: County of Riverside General Plan, Circulation Element.

Lake Mathews South General Plan (LMS-GP). The Riverside County General Plan Circulation Element proposed to realign existing Cajalco Road as a four-lane access-controlled expressway¹ with a 40 m (128 ft) right-of-way. The Lake Mathews South General Plan (LMS-GP) Segment proceeds from the Temescal Canyon Road/Cajalco Road intersection to 789 m (2,590 ft) east of El Sobrante Road at the western terminus of the MV Segment. The segment climbs the hills on an alignment that initially parallels existing Cajalco Road and then traverses the hills to the south of Cajalco Road to minimize the grade changes on the proposed road. A two-way frontage road is proposed directly adjacent to the south side of the new parkway to capture local traffic approaching from the south. This frontage road starts west of Lake Mathews Drive and ends at the El Sobrante Road interchange.

Mead Valley (MV). The Mead Valley (MV) Segment crosses Mead Valley from the terminus of the LMS Segment, 789 m (2,590 ft) east of El Sobrante Road, and extends to 696 m (2,285 ft) east of Day Street. This segment is aligned parallel to and just north of existing Cajalco Road.

Far South (FS). The Far South (FS) Segment is applicable only to Alternative 9. It begins at the eastern terminus of the TWS-C Segment, south of existing Cajalco Road, at the Temescal Canyon Road/Cajalco Road intersection and proceeds east through predominantly vacant land (primarily habitat reserve land owned by either the RCHCA or Metropolitan) remaining south of existing Cajalco Road, approximately 3.2 km (2.0 mi) south of existing Cajalco Road, and extends to the Connector Perris 3 (C3) Segment 125 m (410 ft) east of Haines Street. The FS Segment traverses a portion of the Gavilan Hills.

Connector Perris 1 (C1). The Connector Perris 1 (C1) Segment connects the MV Segment to the Rider Street (RD) Segment. The C1 Segment begins 790 m (2,600 ft) east of Day Street and ends at Patterson Avenue, a distance of approximately 1.6 km (1.0 mi).

Connector Perris 3 (C3). The Connector Perris 3 (C3) Segment begins 125 m (410 ft) east of Haines Street at the east terminus of the FS Segment and extends east approximately 272 m (895 ft) west of Patterson Avenue to the west edge of the Placentia Avenue/Perris Boulevard (PP-D) or Elevated Grade Design Variation (PP-E) Segments.

Perris Drain (PD). The Perris Drain (PD) Segment provides a connection between the Depressed Grade MV and San Jacinto (SJ) Segments along the Perris Drain. This segment begins 696 m (2,285 ft) east of Day Street on the west and ends at 87 m (291 ft) west of Dawson Street. In this segment, approximately 1,600 m (5,250 ft) of the MCP will be elevated approximately 4.5–7.6 m (15–25 ft) above grade on a viaduct. This segment also includes an MCP/I-215 interchange extending along I-215, approximately 3,200 m (11,500 ft) north and 3,100 m (10,250 ft) south of the existing Ramona Expressway/I-215 interchange. The MCP mainline crosses over the I-215.

¹ An expressway is a multi-modal highway corridor for through traffic to which access from abutting property is restricted. Intersections with other streets or highways are limited to approximately one-half mile intervals. Source: County of Riverside General Plan, Circulation Element.

Rider Street (RD). The Rider Street Segment connects the C1 Segment with the SJ Segment. It extends from 21 m (71 ft) east of Patterson Avenue on the west to 87 m (291 ft) west of Dawson Street. This segment also includes an MCP/I-215 interchange extending along I-215 2,530 m (8,300 ft) north and 1,845 m (6,050 ft) south of Rider Street. The MCP mainline crosses over the I-215.

Placentia Avenue/Perris Boulevard Depressed Grade (PP-D). The PP-D Segment follows Placentia Avenue at a point approximately 272 m (895 ft) west of Patterson Avenue, which is the eastern terminus of the C3 Segment, and extends east to 87 m (291 ft) west of Dawson Street. This segment includes an MCP/I-215 interchange, extending along I-215, 1,585 m (5,200 ft) north and 1,860 m (6,100 ft) south of Placentia Avenue. For this segment, the MCP mainline crosses over the I-215. The road is depressed below grade approximately 9.0 m (29.5 ft) from Barrett Avenue to Wilson Avenue. This segment applies only to Alternative 9.

San Jacinto (SJ). The San Jacinto (SJ) Segment extends along existing Ramona Expressway from the eastern terminus of the PD, RD, and PP-D Segments to 1.0 km (0.6 mi) west of Warren Road on the east. The SJ Segment terminates at the San Jacinto North (SJN) and San Jacinto South (SJS) Segments and measures a total distance of approximately 12.3 km (7.63 mi).

San Jacinto South (SJS). The SJS Segment extends from the eastern terminus of the SJ Segment 1.32 km (0.82 mi) west of Warren Road east to SR-79. The connection to SR-79 would be at the new alignment of SR-79 proposed under the SR-79 realignment project. It follows an alignment approximately 300 m (990 ft) south of the existing Ramona Expressway adjacent to the Colorado River Aqueduct. This segment also extends approximately 1,080 m (3,550 ft) north of the Ramona Expressway along SR-79 and approximately 2,560 m (8,400 ft) south of the Ramona Expressway along SR-79.

Temescal Wash Area Design Variation (TWS). This is a design variation for the TWS-C Segment that removes partial access from I-15 to El Cerrito Road. Changes to existing conditions included within this segment include closing the existing southbound on-ramp and northbound off-ramp at El Cerrito Road that connect to I-15. The El Cerrito Road overcrossing will remain open, connecting local streets from one side of I-15 to the other side. Under this design variation, the CD roads will extend from Weirick Road to just north of Cajalco Road. The MCP mainline crosses over the I-15. Other circulation improvements include capacity enhancement for Ontario Avenue and the Ontario Avenue/I-15 interchange, as well as a modified I-15 interchange at Cajalco Road. This design variation applies to all the MCP Build Alternatives.

Connector Perris 2 Design Variation (C2). The Connector Perris 2 (C2) Segment begins at the east terminus of the FS Segment, 125 m (410 ft) east of Haines Street. This segment veers northward at Anderson Street, follows north of Rider Street, and connects to the RD Segment 21 m (74 ft) east of Patterson Avenue. The C2 and RD Segments form the Rider Street Design Variation, which applies only to Alternative 9.

Placentia Avenue/Perris Boulevard Elevated Grade Design Variation (PP-E). PP-E Segment is an elevated design variation of the PP-D Segment. The PP-E Segment follows Placentia Avenue at the eastern terminus of the C3 Segment at a point approximately 272 m (895 ft) west of Patterson Avenue and extends east to 87 m (291 ft) west of Dawson Street. This segment includes an MCP/I-215 interchange, extending along I-215, 1,585 m (5,200 ft) north and 1,860 m (6,100 ft) south of Placentia Avenue. The MCP mainline crosses over the I-215. For this design variation, the road is elevated above grade approximately 8.0 m (26.25 ft) from Barrett Avenue to Wilson Avenue. This design variation applies only to Alternative 9.

San Jacinto North Design Variation (SJN). The SJN Segment extends from the eastern terminus of the SJ Segment 1.32 km (0.82 mi) west of Warren Road and east to SR-79, following an alignment approximately 300 m (990 ft) north of the existing Ramona Expressway. The connection to SR-79 would be at the new alignment of SR-79 proposed under the SR-79 realignment project. This segment also extends approximately 2,160 m (7,090 ft) north of the Ramona Expressway along SR-79 and 1,520 m (4,990 ft) south of the Ramona Expressway along SR-79. The SJN Segment is a design variation of the SJS Segment for all the MCP Build Alternatives.

Alternative Descriptions

Descriptions of the two No Project/No Action Alternatives (Alternatives 1A and 1B) and the five Build Alternatives (Alternatives 4, 5, 6, 7, and 9) that are evaluated in this technical study are provided below. The alignments of the MCP Alternatives are shown on detailed figures in this section. Table A lists the MCP segments and identifies which segments apply to each of the MCP Build Alternatives.

Alternative 1A: No Project/No Action—Existing Ground Conditions. Alternative 1A represents 2035 traffic on the planned street network except for future improvements to Cajalco Road and the Ramona Expressway, which would remain as they exist today. Construction of an MCP project would not be implemented with the No Project/No Action Alternative 1A. The future east-west traffic described in the study area would be served by existing Cajalco Road between I-15 and I-215 and by the existing Ramona Expressway between I-215 and SR-79. This alternative assumes 2035 land use conditions and implementation of planned improvements to the regional and local circulation system, as accounted for in the adopted Riverside County General Plan (2003), RCTC's Measure A program, and other adopted plans and policies.

Alternative 1B: No Project/No Action—General Plan Circulation Element Conditions. Alternative 1B represents 2035 traffic levels on the planned street network, according to the Circulation Element of the Riverside County General Plan. Construction of an MCP project would not be implemented with No Project/No Action Alternative 1B. This alternative is the same as Alternative 1A but includes implementation of improvement to Cajalco Road and the Ramona Expressway consistent with the Riverside County General Plan Circulation Element.

Table A: Mid-County Parkway Segments Representing Each Build Alternative

Alternative Number	Alternative Name	MCP Segments									
		TWS-C	TWS	LMS	LMN-GP	LMS-GP	MV	FS	C1	C2	C3
4	South of Lake Mathews/North Perris (Drain)	DV	Yes	Yes	No	No	Yes	No	No	No	No
5	South of Lake Mathews/South Perris (at Rider Street)	DV	Yes	Yes	No	No	Yes	No	Yes	No	No
6	General Plan North and South of Lake Mathews/North Perris (Drain)	DV	Yes	No	Yes	Yes	Yes	No	No	No	No
7	General Plan North and South of Lake Mathews/South Perris (at Rider Street)	DV	Yes	No	Yes	Yes	Yes	No	Yes	No	No
9	Far South/Placentia Avenue	DV	Yes	No	No	No	No	Yes	No	DV	Yes

Source: Jacobs, June 2006.

Note: MCP Segment Abbreviations

TWS = Temescal Wash Area (Design Variation)
TWS-C = Temescal Wash Area with CD Roads
LMS = Lake Mathews South Segment

LMN-GP = Lake Mathews North General Plan
LMS-GP = Lake Mathews South General Plan
MV = Mead Valley
FS = Far South
C1 = Connector Perris 1

C2 = Connector Perris 2 (Design Variation)
C3 = Connector Perris 3
PD = Perris Drain
RD = Rider Street

PP-D = Placentia Avenue/Perris Boulevard Depressed
PP-E = Placentia Avenue/Perris Boulevard Elevated Grade (Design Variation)
SJ = San Jacinto
SIN = San Jacinto North
SIS = San Jacinto South
DV = Design Variation

Alternative 4: South of Lake Mathews/North Perris (Drain). Alternative 4 proposes a six- to eight-lane controlled access parkway with six mixed-flow lanes for most of its length, and up to eight mixed-flow lanes near the I-215 interchange. Alternative 4 is located south of Lake Mathews and follows a northern alignment through the City of Perris as shown in Figures 1.3a and 1.3b. The Alternative 4 alignment is south of existing Cajalco Road west of Lake Mathews Drive and north of Ramona Expressway from I-215 to east of Redlands Avenue. The alignment between El Sobrante Road and Wood Road is south of existing Cajalco Road, which would continue to be used as a two-way frontage road after the MCP project is constructed. Portions of existing Cajalco Road in Mead Valley would be incorporated into the local street network. Alternative 4 extends from the Temescal Wash Area with CD Roads (TWS-C) Segment to the San Jacinto South (SJS) Segment and includes the Lake Mathews South Segment (LMS); Mead Valley (MV), Perris Drain (PD), and the San Jacinto (SJ) and San Jacinto South (SJS) Segments.

System interchanges (a freeway-to-freeway type interchange) are proposed for all the MCP Build Alternatives at I-15, I-215, and SR-79. The MCP/I-15 interchange is proposed as four levels and would be approximately 30.5 to 38.1 m (100 to 125 ft) in height. The proposed four-level design will not preclude possible future high-occupancy vehicle (HOV) direct connectors at the system interchange at I-15. A collector-distributor road is proposed to run north-south to provide local access to I-15 from local interchanges at Weirick Road, Cajalco Road, El Cerrito Road, and Ontario Avenue.

Similarly, the MCP/I-215 interchange is proposed as a three-level interchange that will not preclude possible future HOV direct connectors. At the highest point, the MCP/I-215 interchange would be approximately 23 to 30 m (75 to 100 ft) above ground level. The MCP mainline crosses over the I-15 and I-215 at the respective system interchanges. A collector distributor road is proposed to run north-south to provide local access to I-215 from the local interchanges at Placentia Avenue, Ramona Expressway, and Oleander Avenue. This alternative includes a realignment of the I-215 mainline to east of the existing location, from Placentia Avenue to just north of Strata Road. The existing railroad tracks west of I-215 are proposed to remain in place.

A three-level interchange is proposed at SR-79 at an approximate height of 15 m (50 ft). The MCP connection to SR-79 will be made at the proposed realignment of SR-79, south of Ramona Expressway. (SR-79 is proposed to be realigned and widened to a six-lane controlled access highway between Ramona Expressway and Domenigoni Parkway and is currently undergoing separate environmental review.) The MCP provides direct connectors to northbound and southbound SR-79, as well as a six lane easterly extension that terminates at a proposed signalized intersection at Ramona Expressway.

Service interchanges (interchanges that connect a controlled-access parkway to local arterials) for Alternative 4 are proposed at a location approximately 2,000 m (6,560 ft) east of Temescal Canyon Road (referred to as the Estelle Mountain interchange), at Lake Mathews Drive, El Sobrante Road, Wood Road, Alexander Street, Clark Street, Perris Boulevard, Evans Road, Ramona Expressway, Bernasconi Road, Reservoir Road, Town Center Boulevard (proposed new arterial associated with future proposed development), Park Center Boulevard (proposed new arterial associated with future proposed development), and Warren Road.

Figure 1.3a: Alternative 4

Figure 1.3b: Alternative 4

Alternative 4 includes two Design Variations at the western and eastern termini of the alternative that use (1) a smaller system of collector-distributor roads at the MCP/I-15 interchange, which includes the removal of the two existing on- and off-ramps at El Cerrito Road, and (2) the SJN segment instead of the SJS segment to connect with SR-79.

Alternative 5: South of Lake Mathews/South Perris (at Rider Street). Alternative 5 is a six- to eight-lane controlled-access parkway with six mixed-flow lanes for most of its length and up to eight mixed-flow lanes near the I-215 interchange. Alternative 5 is south of Lake Mathews and follows a southern alignment through Perris along Rider Street as shown in Figures 1.4a and 1.4b). The Alternative 5 alignment is south of existing Cajalco Road west of Lake Mathews Drive and south of the Ramona Expressway from I-215 to just west of Antelope Road. The alignment between El Sobrante Road and Wood Road is south of existing Cajalco Road, which would continue to be used as a two-way frontage road after the MCP project is constructed. Portions of existing Cajalco Road in Mead Valley would be incorporated into the local street network. Like Alternative 4, Alternative 5 extends from the TWS-C Segment on the west to the SJS Segment on the east. Alternative 5 also coincides with Alternative 4 for the LMS and MV Segments. Alternative 5 differs from Alternative 4 in the Perris segments. Where Alternative 4 includes the PD Segment between the MV and SJ Segments, Alternative 5 extends east from the MV Segment via the C1 and RD Segments to connect to the SJ Segment.

System interchanges proposed for Alternative 5 are the same as for Alternative 4, with connections at I-15, I-215, and SR-79. The MCP mainline crosses over the I-15 and the I-215 at the respective interchanges. The I-215 system interchange differs from that in Alternative 4 as it connects the MCP to I-215 near Rider Street. As with Alternative 4, it is proposed as a three-level interchange that will not preclude possible future HOV direct connectors. The interchange will be approximately 23 to 30 m (75 to 100 ft) above ground level. A collector-distributor road is proposed to run north-south to provide local access to I-215 from the I-215 service interchanges at Placentia Avenue, Ramona Expressway, and Oleander Avenue. This alternative includes a realignment of the I-215 mainline to east of the existing location, from Placentia Avenue to Ramona Expressway. The existing railroad tracks west of I-215 are proposed to remain in place.

Service interchanges for Alternative 5 are proposed at a location approximately 2,000 m (6,560 ft) east of Temescal Canyon Road (referred to as the Estelle Mountain interchange), at Lake Mathews Drive, El Sobrante Road, Wood Road, Alexander Street, Clark Street, Perris Boulevard, Evans Road, Ramona Expressway, Bernasconi Road, Reservoir Road, Town Center Boulevard (proposed new arterial associated with future proposed development), Park Center Boulevard (proposed new arterial associated with future proposed development), and Warren Road.

Alternative 5 includes two design variations at the western and eastern termini of the alternative that use (1) a smaller system of collector-distributor roads at the MCP/I-15 interchange instead of the proposed MCP/I-15 interchange, which includes the removal of two existing on- and off-ramps at El Cerrito Road, and (2) the SJN Segment instead of the SJS Segment to connect with SR-79.

Figure 1.4a: Alternative 5

Figure 1.4b: Alternative 5

Alternative 6: General Plan North and South of Lake Mathews/North Perris (Drain).

Alternative 6 involves the implementation of General Plan Circulation Element improvements between I-15 and El Sobrante Road and a new six- to eight-lane controlled access parkway east of El Sobrante Road to SR-79 as shown in Figures 1.5a and 1.5b. Alternative 6 is the same as Alternative 4 (described above) east of El Sobrante Road and is located north of Ramona Expressway from I-215 to east of Perris Boulevard. The alignment between El Sobrante Road and Wood Road is south of existing Cajalco Road, which would continue to be used as a two-way frontage road after the MCP project is constructed. Portions of existing Cajalco Road in Mead Valley would be incorporated into the local street network. West of El Sobrante Road to I-15, the project includes a four-lane urban arterial north of Lake Mathews¹ and a four-lane access-controlled expressway south of Lake Mathews. These proposed arterial street improvements north and south of Lake Mathews are consistent with the Riverside County General Plan Circulation Element and generally follow the alignments shown in the General Plan. The parkway south of Lake Mathews would be a controlled access expressway that ties into the same system interchange configuration at I-15 as the other MCP Build Alternatives.

System interchanges proposed for Alternative 6 are the same as for Alternative 4, with connections at I-15, I-215, and SR-79. Refer to description of those system interchanges for Alternative 4 above. The Alternative 4 MCP mainline crosses over the I-15 and I-215 at the respective interchanges provided for earlier. Service interchanges for this Alternative are at the same locations as for Alternative 4, even though the location of the alignment south of Lake Mathews is somewhat different from that of Alternative 4. These interchanges include Estelle Mountain, Lake Mathews Drive, El Sobrante Road, Wood Road, Alexander Street, Clark Street, Perris Boulevard, Evans Road, Ramona Expressway, Bernasconi Road, Reservoir Road, Town Center Boulevard (proposed new arterial associated with future proposed development), Park Center Boulevard (proposed new arterial associated with future proposed development), and Warren Road. In addition, the General Plan arterial north of Lake Mathews included in Alternative 6 would modify the existing intersection at La Sierra Avenue and result in a new arterial road extension from La Sierra Avenue in a southwesterly direction to connect with Cajalco Road.

The segments for the General Plan north and south of the Lake Mathews area include the TWS-C, LMN-GP, and LMS-GP Segments. The LMS-GP Segment provides a four-lane access-controlled expressway that connects into I-15. The LMN-GP Segment provides a four-lane arterial that connects into Cajalco Road. The segments from the MV Segment to the SJS Segment are the same as Alternative 4.

Alternative 6 includes two design variations at the western and eastern termini of the alternative that use (1) a smaller system of collector-distributor roads at the MCP/I-15 interchange instead of the proposed MCP/I-15 interchange, which includes the removal of two of the existing on- and off-ramps at El Cerrito Road, and (2) the SJN Segment instead of the SJS Segment to connect with SR-79.

¹ The General Plan provides for up to six lanes in this location; however, traffic forecast modeling indicates that four lanes will meet projected demand.

Figure 1.5a: Alternative 6

Figure 1.5b: Alternative 6

Alternative 7: General Plan North and South of Lake Mathews/South Perris (at Rider Street).

Alternative 7 proposes the implementation of General Plan Circulation Element improvements between I-15 and El Sobrante Road and a new six- to eight-lane controlled access parkway east of El Sobrante Road to SR-79 (as shown on Figures 1.6a and 1.6b). Alternative 7 is the same as Alternative 5 (described above) east of El Sobrante Road and follows a southerly alignment through Perris. The alignment between El Sobrante Road and Wood Road is south of existing Cajalco Road, which would continue to be used as a two-way frontage road after the project is constructed. Portions of existing Cajalco Road in Mead Valley would be incorporated into the local street network. West of El Sobrante Road to I-15, the Riverside County General Plan includes a four-lane urban arterial north of Lake Mathews¹ and a four-lane access-controlled expressway south of Lake Mathews. These proposed arterial street improvements north and south of Lake Mathews are consistent with the Riverside County General Plan Circulation Element and are the same as described above for Alternative 6.

System interchanges proposed for Alternative 7 are the same as Alternative 5 with connections at I-15, I-215, and SR-79. Refer to the description of those systems interchanges provided above for Alternative 5. The MCP mainline crosses over the I-15 and I-215 at the respective interchanges. Service interchanges for this Alternative are at the same locations as for Alternative 5, even though the location of the alignment south of Lake Mathews is somewhat different from that of Alternative 5. These interchanges include Estelle Mountain, Lake Mathews Drive, El Sobrante Road, Wood Road, Alexander Street, Clark Street, Perris Boulevard, Evans Road, Ramona Expressway, Bernasconi Road, Reservoir Road, Town Center Boulevard (proposed new arterial associated with future proposed development), Park Center Boulevard (proposed new arterial associated with future proposed development), and Warren Road. In addition, the General Plan arterial north of Lake Mathews included in Alternative 7 would modify the existing intersection at La Sierra Avenue and result in a new arterial road extension from La Sierra Avenue in a southeasterly direction to connect with Cajalco Road.

The segments for the General Plan north and south of the Lake Mathews area include the TWS-C, LMN-GP, and LMS-GP Segments. The LMS-GP Segment provides a four-lane access-controlled expressway that connects into I-15. The LMN-GP Segment provides a six-lane arterial that connects into Cajalco Road. The segments from the MV to the SJS Segment are the same as for Alternative 5.

Alternative 7 includes two design variations at the western and eastern termini of the alternative that use (1) a smaller system of collector-distributor roads at the MCP/I-15 interchange instead of the proposed MCP/I-15 interchange, which includes the removal of two of the existing on- and off-ramps at El Cerrito Road, and (2) the SJN Segment instead of the SJS Segment to connect with SR-79.

Alternative 9: Far South/Placentia Avenue. Alternative 9 is approximately 3.2 km (2.0 mi) south of Cajalco Road for much of its length but shares the same connection to I-15 as Alternatives 4 and 5 (TWS-C segment). The alignment and proposed interchange locations for Alternative 9 are shown in Figures 1.7a and 1.7b. Alternative 9 is a four- to six-lane controlled-access parkway south of both Lake Mathews and Mead Valley and a six- to eight-lane controlled-access parkway between Old

¹ The General Plan provides for up to six lanes in this location; however, traffic forecast modeling indicates that four lanes will meet projected demand.

Figure 1.6a: Alternative 7

Figure 1.6b: Alternative 7

Figure 1.7a: Alternative 9

Figure 1.7b: Alternative 9

Elsinore Road and I-215 and a six- to eight-lane controlled-access parkway between I-215 and SR-79. Alternative 9 is comprised of the following segments: TWS-C, FS, C3, PP-D, SJ, and SJS. Alternative 9 is unique compared to the other MCP Build Alternatives for the segments between Lake Mathews Drive and Placentia/Rider Streets. The segments unique to Alternative 9 include the FS, the connector to Placentia Avenue (C3), and the PP-D Segments.

System interchanges are proposed for all the MCP Build Alternatives, including Alternative 9, at I-15, I-215, and SR-79. The system interchanges at I-15 and SR-79 for Alternative 9 are the same as those proposed for Alternatives 4, 5, 6, and 7. The MCP mainline crosses over the I-15 and I-215 at the respective system interchanges. The proposed system interchange at I-215 differs for Alternative 9 from the other MCP Build Alternatives, as it connects MCP to I-215 approximately 45 m (150 ft) south of Placentia Avenue. The system interchange is proposed as a three-level interchange that will not preclude possible future HOV direct connectors. At its highest point, the interchange would be approximately 23–30 m (75–100 ft) high. This alternative does not require a collector-distributor road system at the I-215 interchange, nor does it require any change to the existing railroad tracks west of I-215. There is a service interchange at the realigned Placentia Avenue for the I-215 and a service interchange at Perris Boulevard for access to the MCP. Service interchanges for Alternative 9 are also proposed at a location approximately 2,000 m (6,560 ft) east of Temescal Canyon Road (referenced as the Estelle Mountain interchange), Lake Mathews Drive, Old Elsinore Road, Evans Road, Ramona Expressway, Bernasconi Road, Reservoir Road, Town Center Boulevard (proposed new arterial associated with future proposed development), Park Center Boulevard (proposed new arterial associated with future proposed development), and Warren Road.

Four design variations apply to Alternative 9, as described below.

Design Variations

The following two design variations apply only to Alternative 9:

Rider Street Design Variation (C2 and RD). The Rider Street design variation begins at the eastern terminus of the FS Segment, approximately 125 m (410 ft) east of Haines Street. This design variation includes all the Connector Perris 2 and Rider Street Segments. The combination of the C2 and RD Segments is applicable only as a design variation for Alternative 9. The RD Segment is also part of Alternatives 5 and 7. The RD design variation terminates 87 m (291 ft) west of Dawson Street. This design variation also includes the MCP/I-215 interchange, similar to Alternatives 5 and 7, with it extending along I-215 north and south of Rider Street (see Figures 1.7a and 1.7b).

Placentia Avenue/Perris Boulevard Elevated Grade Design Variation (PP-E). PP-E is an elevated design variation of the PP-D Segment in Alternative 9. This PP-E Segment follows Placentia Avenue at the eastern terminus of the C3 Segment at a point approximately 272 m (895 ft) west of Patterson Avenue and extends east 87 m (291 ft) to Dawson Street. This segment includes an MCP/I-215 interchange, extending along I-215, approximately 1,570 m (5,150 ft) north and 1,870 m (6,100 ft) south of Placentia Avenue. The MCP mainline crosses over the I-215. For this design variation, the road is elevated approximately 8 m (26.25 ft) above grade from Barrett Avenue to Wilson Avenue.

The following design variations apply to all the MCP Build Alternatives:

Temescal Wash Area Design Variation (TWS). This is a design variation for the TWS-C Segment that partially removes access to I-15 from El Cerrito Road. In this design variation, the El Cerrito interchange southbound on-ramp and northbound off-ramps would be closed. A collector-distributor road system is provided from Weirick Road to Cajalco Road, with modifications to the existing Weirick Road, El Cerrito Road, and Ontario Avenue interchanges. A new interchange on I-15 would be constructed at Cajalco Road, just north of the existing Cajalco Road interchange, which would be removed.

San Jacinto North Design Variation (SJN). The SJN segment extends from the eastern terminus of the SJ Segment 1.32 km (0.82 mi) west of Warren Road east to SR-79. It follows an alignment approximately 347.4 m (1,140 ft) north of the existing Ramona Expressway adjacent to the Colorado Aqueduct. This segment also extends approximately 1.48 km (0.92 mi) north of the Ramona Expressway along SR-79 and approximately 1.06 km (0.67 mi) south of the Ramona Expressway along SR-79.

PM_{2.5} AND PM₁₀ HOT-SPOT METHODOLOGY

The new Final Rule establishes the transportation conformity criteria and procedures for determining which transportation projects must be analyzed for local air quality impacts in PM_{2.5} and PM₁₀ nonattainment and maintenance areas. The proposed project is in the South Coast Air Basin (Basin), which has been designated as a federal nonattainment area for PM_{2.5} and PM₁₀; therefore, a hot-spot analysis is required.

A hot-spot analysis is defined in the Code of Federal Regulations (CFR) (40 CFR 93.101) as an estimation of likely future localized pollutant concentrations and a comparison of those concentrations to the relevant air quality standards. A hot-spot analysis assesses the air quality impacts on a scale smaller than an entire nonattainment or maintenance area, such as for congested roadway intersections and highways or transit terminals. Such an analysis is a means of demonstrating that a transportation project meets Clean Air Act (CAA) conformity requirements to support State and local air quality goals with respect to potential localized air quality impacts. When a hot-spot analysis is required, it is included within the project-level conformity determination that is made by the FHWA or the Federal Transit Administration (FTA).

Section 176(c)(1)(B) of the CAA is the statutory criterion that must be met by all projects in nonattainment and maintenance areas that are subject to transportation conformity. Section 176(c)(1)(B) states that federally supported transportation projects must not "cause or contribute to any new violation of any standard in any area; increase the frequency or severity of any existing violation of any standard in any area; or delay timely attainment of any standard or any required interim emission reductions or other milestones in any area."

Ambient Air Quality Standards

PM_{2.5} nonattainment and maintenance areas are required to attain and maintain two ambient air quality standards (AAQS):

- **24-hour Standard:** 35 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). Based on 2004–2006 monitored data, the EPA tightened the PM_{2.5} 24-hour standard from 65 to 35 $\mu\text{g}/\text{m}^3$, effective December 2006. New area designations will become effective in early 2010 (EPA, 2006b).
- **Annual Standard:** 15.0 $\mu\text{g}/\text{m}^3$

The current 24-hour standard is based on a three-year average of the 98th percentile of 24-hour PM_{2.5} concentrations. The current annual standard is based on a three-year average of annual mean PM_{2.5} concentrations. A PM_{2.5} hot-spot analysis must consider both standards unless it is determined for a given area in which meeting the controlling standard would ensure that CAA requirements are met for both standards. The interagency consultation process should be used to discuss how the qualitative PM_{2.5} hot-spot analysis meets statutory and regulatory requirements for both PM_{2.5} standards, depending on the factors that are evaluated for a given project.

PM₁₀ nonattainment and maintenance areas are required to attain the following standard:

- **24-hour Standard:** 150 $\mu\text{g}/\text{m}^3$

The 24-hour PM₁₀ standard is attained when the average number of exceedances in the previous three calendar years is less than or equal to 1.0. An exceedance occurs when a 24-hour concentration of 155 $\mu\text{g}/\text{m}^3$ or greater is measured at a site. The annual PM₁₀ standard of 50 $\mu\text{g}/\text{m}^3$ is no longer used for determining the federal attainment status. The interagency consultation process should be used to discuss how the qualitative PM₁₀ hot-spot analysis meets statutory and regulatory requirements for the PM₁₀ standards, depending on the factors that are evaluated for a given project.

To meet statutory requirements, the 2006 Final Rule requires PM_{2.5} and PM₁₀ hot-spot analyses to be performed for Projects of Air Quality Concern (POAQC). The Final Rule states that projects not identified in 40 CFR 93.123(b)(1) as POAQC have met statutory requirements without any further hot-spot analyses (40 CFR 93.116[a]).

PM_{2.5} AND PM₁₀ HOT-SPOT ANALYSIS

Projects of Air Quality Concern

The first step in the hot-spot analysis is to determine whether a project meets the standard for a POAQC. The EPA specified in 40 CFR 93.123(b)(1) of the 2006 Final Rule that POAQC are certain highway and transit projects that involve significant levels of diesel vehicle traffic, or any other project that is identified in the PM_{2.5} and PM₁₀ State Implementation Plan (SIP) as a localized air quality concern. The 2006 Final Rule defines the POAQC that require a PM_{2.5} and PM₁₀ hot-spot analysis in 40 CFR 93.123(b)(1) as:

- i. New or expanded highway projects that have a significant number of or significant increase in diesel vehicles;

- ii. Projects affecting intersections that are at level of service (LOS) D, E, or F with a significant number of diesel vehicles, or those that will change to LOS D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project;
- iii. New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location;
- iv. Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location; or
- v. Projects in or affecting locations, areas, or categories of sites that are identified in the PM_{2.5} and PM₁₀ applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

The proposed MCP project would meet the criteria in Items i and ii above, as it would construct a new highway facility that would impact existing intersections. Therefore, this project is considered to be a POAQC, and a qualitative project-level PM_{2.5} and PM₁₀ hot-spot analysis has been conducted to assess whether the project would cause or contribute to any new localized PM_{2.5} or PM₁₀ violations, increase the frequency or severity of any existing violations, or delay timely attainment of the PM_{2.5} and PM₁₀ AAQS.

Types of Emissions Considered

In accordance with the EPA/FHWA Guidance, this hot-spot analysis is based only on directly emitted PM_{2.5} and PM₁₀ emissions. Tailpipe, brake wear, and tire wear PM_{2.5} and PM₁₀ emissions were considered in this hot-spot analysis.

Vehicles cause dust from paved and unpaved roads to be re-entrained, or resuspended, in the atmosphere. According to the 2006 Final Rule, road dust emissions are to be considered for PM₁₀ hot-spot analyses. For PM_{2.5}, road dust emissions are only to be considered in hot-spot analyses if the EPA or the State air agency has made a finding that such emissions are a significant contributor to the PM_{2.5} air quality problem (40 CFR 93.102(b)(3)). The EPA or the California Air Resources Board (ARB) has not yet made such a finding of significance; therefore, re-entrained PM_{2.5} is not considered in this analysis.

Secondary particles formed through PM_{2.5} and PM₁₀ precursor emissions from a transportation project take several hours to form in the atmosphere, giving emissions time to disperse beyond the immediate project area of concern for localized analyses; therefore, they were not considered in this hot-spot analysis. Secondary emissions of PM_{2.5} and PM₁₀ are considered as part of the regional emission analysis prepared for the conforming RTP and Federal Transportation Improvement Program (FTIP).

According to the project schedule, no phase of construction would last more than five years, and construction-related emissions may be considered temporary; therefore, any construction-related PM_{2.5} and PM₁₀ emissions due to this project were not included in this hot-spot analysis. This project will comply with the South Coast Air Quality Management District (SCAQMD) Fugitive Dust Rules for fugitive dust during construction of this project. Excavation, transportation, placement, and handling of excavated soils will result in no visible dust migration. A water truck or tank will be available within the project limits at all times to suppress and control the migration of fugitive dust from earthwork operations.

Analysis Method

According to hot-spot methodology, estimates of future localized PM_{2.5} pollutant concentrations need to be determined. This analysis makes those estimates by extrapolating present PM_{2.5} pollutant concentrations from air quality data measured at monitoring stations in the vicinity of the proposed project. The data from these stations are combined with projections from the 2003 Air Quality Management Plan (AQMP) prepared by the SCAQMD and examined for trends in order to predict future conditions in the project vicinity. Additionally, the impacts of the project and the likelihood of these impacts interacting with the ambient PM_{2.5} levels to cause hot spots are discussed.

Data Considered

The closest air monitoring stations to the project site are the Riverside-Rubidoux, Riverside-Magnolia, and the Perris Stations. Of these monitoring stations, Riverside-Rubidoux and Riverside-Magnolia monitor PM_{2.5} concentrations. The Riverside-Rubidoux and Perris Stations monitor PM₁₀ concentrations. These monitoring stations are located in Riverside County within the vicinity of SR-60, SR-91, and I-215. Therefore, the air quality concentrations monitored at this station are representative of the conditions within the project area.

Baseline PM_{2.5} Emissions. The monitored PM_{2.5} concentrations at the Riverside-Rubidoux and Riverside-Magnolia Stations are shown in Table B. These data show that the federal 24-hour PM_{2.5} AAQS (35 µg/m³) has been exceeded at these stations in each of the past six years. In addition, the annual average PM_{2.5} AAQS (15 µg/m³) at these stations was exceeded in all six years; however, the concentrations continue to diminish every year.

Table B: Ambient PM_{2.5} Monitoring Data (µg/m³)

	2001	2002	2003	2004	2005	2006
Riverside-Rubidoux Air Quality Monitoring Station						
3-year average 98th percentile	74	66	77	60	58	54
Exceeds federal 24-hour standard (35 µg/m ³)?	Yes	Yes	Yes	Yes	Yes	Yes
National annual average	31.0	27.4	24.8	22.1	21.0	19.2
Exceeds federal annual average standard (15 µg/m ³)?	Yes	Yes	Yes	Yes	Yes	Yes
Riverside-Magnolia Air Quality Monitoring Station						
3-year average 98th percentile	66	64	56	54	41	48
Exceeds federal 24-hour standard (35 µg/m ³)?	Yes	Yes	Yes	Yes	Yes	Yes
National annual average	28.2	27.1	22.6	20.8	17.9	16.9
Exceeds federal annual average standard (15 µg/m ³)?	Yes	Yes	Yes	Yes	Yes	Yes

Source: EPA Web site: <http://www.epa.gov/air/data/monvals.html?st~CA~California>, May 2007.

While the current levels of PM_{2.5} in the project vicinity are generally above the federal 24-hour standard, indications are that levels in the future will continue to decrease. To estimate the future background PM_{2.5} concentrations, an exponential projection was made of the three-year 98th percentile levels (the 2003 AQMP does not have any projections for PM_{2.5} concentrations). The straight-line projection for the Riverside-Rubidoux and Riverside-Magnolia levels indicates that the PM_{2.5} concentration would be at the federal 24-hour PM_{2.5} standard of 35 µg/m³ in approximately 2009 and 2011, respectively. This trend is consistent with the ARB's plan to achieve attainment for PM_{2.5} by 2010. The Initial Attainment SIP submittal to the EPA is anticipated by April 2008.

Baseline PM₁₀ Emissions. The monitored PM₁₀ concentrations at the Riverside-Rubidoux and Perris Stations, shown in Table C, indicate that the federal 24-hour PM₁₀ AAQS (150 µg/m³) was not exceeded between 2001 and 2006.

Table C: Ambient PM₁₀ Monitoring Data (µg/m³)

	2001	2002	2003	2004	2005	2006
Riverside-Rubidoux Air Quality Monitoring Station						
First Highest	136	130	164	137	123	109
Second Highest	133	102	159	131	98	101
Third Highest	131	100	134	122	96	100
Fourth Highest	117	99	133	119	92	100
No. of days above national 24-hour standard (150 µg/m ³)	0	0	0	0	0	0
Perris Air Quality Monitoring Station						
First Highest	86	100	142	83	80	125
Second Highest	79	79	116	79	70	101
Third Highest	78	76	116	72	69	88
Fourth Highest	77	72	80	69	66	80
No. of days above national 24-hour standard (150 µg/m ³)	0	0	0	0	0	0

Source: ARB Web site: <http://www.arb.ca.gov/adam/welcome.html>, July 2007.

While the current levels of PM₁₀ in the project vicinity are below federal standards, indications are that levels in the future will decrease even further. The draft 2007 AQMP (SCAQMD) reports that since the federal annual PM₁₀ standard has been revoked, the Basin is expected to be declared in attainment for the 24-hour federal PM₁₀ standard since 2000. Tables 2-23 and 2-25 on pages V-2-57 and V-2-58, respectively, in Appendix V of the approved 2003 AQMP show the projected maximum 24-hour average PM₁₀ concentrations for the Rubidoux area to be 150.0 and 137.1 µg/m³ for 2006 and 2010, respectively. This decrease in emissions in the future is largely due to continued improvements in emissions control technologies. To estimate what the background PM₁₀ concentration will be in 2035, a straight-line projection was made from the 2006 and 2010 values, predicting an ambient concentration of 56.5 µg/m³ for the 24-hour standard by 2035.

Transportation and Traffic Conditions

Existing and future (2035) no build average daily traffic (ADT) volumes, truck percentages, and average daily truck volumes for Cajalco Road and Ramona Expressway in the project area are shown in Table D. The traffic volumes along the local roads include 5 percent diesel trucks. The table indicates that Cajalco Road and Ramona Expressway currently experience fewer than 10,000 trucks annual average daily traffic (AADT).

Table D: Existing (2005) and No Build (2035) Average Daily Traffic Volumes (Truck Average Daily Volumes)

Roadway Link	Existing (2005)	2035 No Build
Cajalco Road from La Sierra Avenue to Lake Mathews Drive	9,210 (461) ¹	17,700 (885)
Cajalco Road from Lake Mathews Drive to El Sobrante Road	11,600 (580)	14,300 (715)
Cajalco Road from El Sobrante Road to Wood Road	14,890 (745)	23,400 (1,170)
Cajalco Road from Wood Road to Alexander Street	12,830 (642)	23,400 (1,170)
Cajalco Road from Alexander Street to Clark Street	13,870 (694)	25,300 (1,265)
Cajalco Road from Clark Street to I-215	17,110 (856)	45,900 (2,295)
Ramona Expressway from I-215 to Perris Boulevard	24,500 (1,225)	62,900 (3,145)
Ramona Expressway from Perris Boulevard to Evans Road	20,460 (1,023)	37,200 (1,860)
Ramona Expressway from Evans Road to Bernasconi Road	16,190 (810)	32,900 (1,645)
Ramona Expressway from Bernasconi Road to Reservoir Avenue	13,660 (683)	33,200 (1,660)
Ramona Expressway from Reservoir Avenue to Town Center Boulevard	11,310 (566)	32,800 (1,640)
Ramona Expressway from Town Center Boulevard to Park Center Boulevard	10,430 (523)	34,500 (1,725)
Ramona Expressway from Park Center Boulevard to Warren Road	10,030 (502)	29,000 (1,450)
Ramona Expressway from Warren Road to SR-79	12,660 (633)	28,500 (1,425)

Source: VRPA, July 2007.

Traffic Changes Due to the Proposed Project

The proposed project is a new roadway construction project. Based on the Mid County Parkway Traffic Technical Report (VRPA, July 2007), the proposed project would increase the traffic volumes along Cajalco Road and Ramona Expressway. However, the traffic volumes along MCP would not exceed the 125,000 ADT threshold for a POAQC. In addition, the total truck average daily trips would remain below the 10,000-vehicle threshold for POAQC. The future traffic volumes along MCP for each of the build alternatives are shown in Table E.

¹ Truck ADT calculated using projected truck percentage of 5 percent.

Table E: 2035 Project Alternative Average Daily Traffic Volumes (Truck Average Daily Volumes)

Roadway Link	Alternative 4 Traffic Volumes	Alternative 5 Traffic Volumes	Alternative 6 Traffic Volumes	Alternative 7 Traffic Volumes	Alternative 9 Traffic Volumes
MCP from Cajalco Connector to Lake Mathews Drive	61,400 (3,070) ¹	61,000 (3,050)	50,600 (2,530)	50,600 (2,530)	55,000 (2,750)
MCP from Lake Mathews Drive to El Sobrante Road	60,600 (3,030)	60,000 (3,000)	50,000 (2,500)	49,600 (2,480)	52,200 (2,610) ²
MCP from El Sobrante Road to Wood Road	72,400 (3,620)	72,000 (3,600)	64,600 (3,230)	64,000 (3,200)	66,600 (3,330) ³
MCP from Wood Road to Alexander Street	73,600 (3,680)	73,400 (3,670)	67,200 (3,360)	66,600 (3,330)	66,600 (3,330) ³
MCP from Alexander Street to Clark Street	76,200 (3,810)	75,200 (3,760)	70,000 (3,500)	69,400 (3,470)	66,600 (3,330) ³
MCP from Clark Street to I-215	77,200 (3,860)	76,400 (3,820)	72,600 (3,630)	73,000 (3,650)	66,600 (3,330) ³
MCP from I-215 to Perris Boulevard	104,000 (5,200)	102,000 (5,100)	100,400 (5,020)	99,400 (4,970)	86,600 (4,330) ⁴
MCP from Perris Boulevard to Evans Road	76,000 (3,800)	72,800 (3,640)	71,200 (3,560)	70,200 (3,510)	69,800 (3,490)
MCP from Evans Road to Ramona Expressway	73,000 (3,650)	71,800 (3,590)	70,000 (3,500)	69,400 (3,470)	68,800 (3,440)
MCP from Ramona Expressway to Bernasconi Road	73,600 (3,680)	72,000 (3,600)	72,000 (3,600)	71,400 (3,570)	69,800 (3,490)
MCP from Bernasconi Road to Reservoir Avenue	74,000 (3,700)	73,000 (3,650)	68,800 (3,440)	68,200 (3,410)	70,000 (3,500)
MCP from Reservoir Avenue to 5th Street	71,600 (3,580)	69,600 (3,480)	64,200 (3,210)	63,600 (3,180)	66,000 (3,300)
MCP from 5th Street to Park Center Boulevard	76,600 (3,830)	75,200 (3,760)	69,200 (3,460)	69,200 (3,460)	72,400 (3,620)
MCP from Park Center Boulevard to Warren Road	68,800 (3,440)	67,200 (3,360)	64,800 (3,240)	64,000 (3,200)	64,400 (3,220)
MCP from Warren Road to SR-79	63,000 (3,150)	62,000 (3,100)	58,200 (2,910)	57,400 (2,870)	59,200 (2,960)

Source: VRPA, July 2007.

- ¹ Truck ADT calculated using projected truck percentage of 5 percent.
- ² Mid County Parkway between Lake Mathews Drive and Old Elsinore Road.
- ³ Mid County Parkway between Old Elsinore Road and I-215 is a limited access road.
- ⁴ Traffic analysis of the Mid County Parkway main line for Alternative 9 between I-215 and Perris Boulevard excludes traffic to and from I-215.

Tables F and F show the 2035 No Build/No Action and 2035 No Build/County General Plan levels of service (LOS) and delay in the project area for the a.m. and p.m. peak hours. Tables G, H, I, J, K and L show the 2035 LOS and delay in the project area for Build Alternatives 4, 5, 6, 7, and 9, respectively. As shown, the proposed project would improve the LOS and reduce the delay the intersections within the project area.

Table F: 2035 No Project/No Action Intersection Levels of Service

Intersection		AM Peak Hour		PM Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
1.	Cajalco Road/Temescal Canyon Road	43.7	D	57.6	E
2.	Cajalco Road/Lake Mathews Drive	> 80	F	56.1	E
3.	Cajalco Road/El Sobrante Road	> 80	F	26.7	C
4.	Cajalco Road/Wood Road	62.7	E	> 80	F
5.	Cajalco Road/Clark Street	45.1	D	> 80	F
6.	Ramona Expressway/Perris Boulevard	> 80	F	> 80	F
7.	Ramona Expressway/Evans Road	60.7	E	58.7	E
8.	Ramona Expressway/Park Center Boulevard	> 80	F	> 80	F
9.	Ramona Expressway/Warren Road	> 80	F	> 80	F

Notes:

LOS = Level of Service

Table G: 2035 No Project/County General Plan Intersection Levels of Service

Intersection		AM Peak Hour		PM Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
1.	Cajalco Road/Temescal Canyon Road	43.7	D	57.6	E
2.	Cajalco Road/Lake Mathews Drive	24.2	C	15.7	B
3.	Cajalco Road/El Sobrante Road	37.0	D	17.1	B
4.	Cajalco Road/Wood Road	30.8	C	28.9	C
5.	Cajalco Road/Clark Street	21.5	C	28.3	C
6.	Ramona Expressway/Perris Boulevard	> 80	F	> 80	F
7.	Ramona Expressway/Evans Road	46.7	D	45.8	D
8.	Ramona Expressway/Park Center Boulevard	45.1	D	> 80	F
9.	Ramona Expressway/Warren Road	> 80	F	> 80	F

Notes:

LOS = Level of Service

Table H: 2035 Alternative 4 Intersection Levels of Service

Intersection		AM Peak Hour		PM Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
1.	Cajalco Road/Temescal Canyon Road	31.0	C	33.3	C
2.	MCP/Lake Mathews Drive WB Ramps	26.9	C	24.1	C
3.	MCP/Lake Mathews Drive EB Ramps	14.4	B	29.4	C
4.	MCP/El Sobrante Road WB Ramps	23.5	C	22.8	C
5.	MCP/El Sobrante Road EB Ramps	47.6	D	24.2	C
6.	MCP/Wood Road WB Ramps	8.1	A	8.4	A
7.	MCP/Wood Road EB Ramps	10.2	B	10.7	B
8.	MCP/Clark Street WB Ramps	3.8	A	5.2	A
9.	MCP/Clark Street EB Ramps	12.1	B	16.4	B
10.	MCP/Perris Boulevard WB Ramps	7.3	A	6.4	A
11.	MCP/Perris Boulevard EB Ramps	10.7	B	12.8	B
12.	MCP/Evans Road WB Ramps	4.5	A	9.2	A
13.	MCP/Evans Road EB Ramps	7.2	A	8.8	A
14.	MCP/Ramona Expressway WB Ramps	2.7	A	2.3	A
15.	MCP/Ramona Expressway EB Ramps	4.8	A	6.6	A
16.	MCP/Park Center Boulevard WB Ramps	13.4	B	10.9	B
17.	MCP/Park Center Boulevard EB Ramps	10.9	B	18.9	B
18.	MCP/Warren Road WB Ramps	7.7	A	7.9	A
19.	MCP/Warren Road EB Ramps	9.7	A	12.5	B

Source: VRPA, July 2007.

Notes:

LOS = Level of Service

Table I: 2035 Alternative 5 Intersection Levels of Service

Intersection		AM Peak Hour		PM Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
1.	Cajalco Road/Temescal Canyon Road	31.0	C	33.3	C
2.	MCP/Lake Mathews Drive WB Ramps	24.8	C	21.6	C
3.	MCP/Lake Mathews Drive EB Ramps	12.1	B	20.5	C
4.	MCP/El Sobrante Road WB Ramps	23.7	C	25.3	C
5.	MCP/El Sobrante Road EB Ramps	44.2	D	24.2	C
6.	MCP/Wood Road WB Ramps	8.7	A	12.0	B
7.	MCP/Wood Road EB Ramps	11.2	B	10.0	B
8.	MCP/Clark Street WB Ramps	4.4	A	5.9	A
9.	MCP/Clark Street EB Ramps	11.8	B	21.4	C
10.	MCP/Perris Boulevard WB Ramps	15.1	B	17.7	B
11.	MCP/Perris Boulevard EB Ramps	17.1	B	22.8	C
12.	MCP/Evans Road WB Ramps	5.4	A	6.7	A
13.	MCP/Evans Road EB Ramps	8.0	A	9.6	A
14.	MCP/Ramona Expressway WB Ramps	2.2	A	2.6	A
15.	MCP/Ramona Expressway EB Ramps	1.5	A	1.7	A
16.	MCP/Park Center Boulevard WB Ramps	12.8	B	12.1	B
17.	MCP/Park Center Boulevard EB Ramps	12.1	B	22.3	C
18.	MCP/Warren Road WB Ramps	8.4	A	9.5	A
19.	MCP/Warren Road EB Ramps	8.8	A	17.0	B

Source: VRPA, July 2007.

Notes:

LOS = Level of Service

Table J: 2035 Alternative 6 Intersection Levels of Service

Intersection		AM Peak Hour		PM Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
1.	Cajalco Road/Temescal Canyon Road	34.6	C	42.3	D
2.	MCP/Lake Mathews Drive WB Ramps	22.1	C	28.2	C
3.	MCP/Lake Mathews Drive EB Ramps	12.1	B	40.2	D
4.	MCP/El Sobrante Road WB Ramps	21.2	C	29.8	C
5.	MCP/El Sobrante Road EB Ramps	26.3	C	9.3	A
6.	MCP/Wood Road WB Ramps	9.3	A	19.0	B
7.	MCP/Wood Road EB Ramps	10.3	B	12.7	B
8.	MCP/Clark Street WB Ramps	4.1	A	5.1	A
9.	MCP/Clark Street EB Ramps	12.4	B	16.5	B
10.	MCP/Perris Boulevard WB Ramps	8.1	A	5.1	A
11.	MCP/Perris Boulevard EB Ramps	11.7	B	14.8	B
12.	MCP/Evans Road WB Ramps	4.7	A	5.6	A
13.	MCP/Evans Road EB Ramps	6.9	A	6.3	A
14.	MCP/Ramona Expressway WB Ramps	3.1	A	2.9	A
15.	MCP/Ramona Expressway EB Ramps	1.4	A	2.5	A
16.	MCP/Park Center Boulevard WB Ramps	12.6	B	11.2	B
17.	MCP/Park Center Boulevard EB Ramps	8.5	A	13.8	B
18.	MCP/Warren Road WB Ramps	6.3	A	6.8	A
19.	MCP/Warren Road EB Ramps	8.2	A	11.5	B

Source: VRPA, July 2007.

Notes:

LOS = Level of Service

Table K: 2035 Alternative 7 Intersection Levels of Service

Intersection		AM Peak Hour		PM Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
1.	Cajalco Road/Temescal Canyon Road	34.6	C	42.3	D
2.	MCP/Lake Mathews Drive WB Ramps	26.9	C	23.8	C
3.	MCP/Lake Mathews Drive EB Ramps	13.2	B	27.1	C
4.	MCP/El Sobrante Road WB Ramps	37.1	D	37.1	D
5.	MCP/El Sobrante Road EB Ramps	26.9	C	15.7	B
6.	MCP/Wood Road WB Ramps	15.5	B	21.6	C
7.	MCP/Wood Road EB Ramps	14.2	B	13.3	B
8.	MCP/Clark Street WB Ramps	10.3	B	12.0	B
9.	MCP/Clark Street EB Ramps	15.4	B	20.1	C
10.	MCP/Perris Boulevard WB Ramps	13.8	B	21.2	C
11.	MCP/Perris Boulevard EB Ramps	16.6	B	22.3	C
12.	MCP/Evans Road WB Ramps	5.8	A	6.2	A
13.	MCP/Evans Road EB Ramps	6.7	A	5.7	A
14.	MCP/Ramona Expressway WB Ramps	3.8	A	2.6	A
15.	MCP/Ramona Expressway EB Ramps	5.9	A	8.1	A
16.	MCP/Park Center Boulevard WB Ramps	18.4	B	15.8	B
17.	MCP/Park Center Boulevard EB Ramps	13.8	B	17.1	B
18.	MCP/Warren Road WB Ramps	11.6	B	12.6	B
19.	MCP/Warren Road EB Ramps	15.0	B	19.1	B

Source: VRPA, July 2007.

Notes:

LOS = Level of Service

Table L: 2035 Alternative 9 Intersection Levels of Service

Intersection		AM Peak Hour		PM Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
1.	Cajalco Road/Temescal Canyon Road	31.0	C	33.3	C
2.	MCP/Lake Mathews Drive WB Ramps	28.0	C	25.0	C
3.	MCP/Lake Mathews Drive EB Ramps	13.9	B	23.4	C
4.	MCP/Old Elsinore Road WB Ramps	11.9	B	13.1	B
5.	MCP/Old Elsinore Road EB Ramps	12.3	B	38.1	D
6.	MCP/Perris Boulevard Ramps	20.7	C	21.6	C
7.	MCP/Evans Road WB Ramps	9.0	A	8.9	A
8.	MCP/Evans Road EB Ramps	6.8	A	7.4	A
9.	MCP/Ramona Expressway WB Ramps	2.2	A	2.3	A
10.	MCP/Ramona Expressway EB Ramps	3.7	A	6.2	A
11.	MCP/Park Center Boulevard WB Ramps	12.6	B	10.2	B
12.	MCP/Park Center Boulevard EB Ramps	12.0	B	18.5	B
13.	MCP/Warren Road WB Ramps	7.7	A	8.3	A
14.	MCP/Warren Road EB Ramps	12.2	B	12.7	B

Source: VRPA, July 2007.

Notes:

LOS = Level of Service

CONCLUSION

Transportation conformity is required under Section 176(c) of the CAA to ensure that federally supported highway and transit project activities are consistent with the purpose of the SIP. Conformity to the purpose of the SIP means that transportation activities will not cause new air quality violations, worsen existing violations, or delay timely attainment of the relevant AAQS. As required by the 2006 Final Rule, this qualitative PM_{2.5} and PM₁₀ hot-spot analysis demonstrates that this project meets the CAA conformity requirements to support State and local air quality goals with respect to potential localized air quality impacts.

It is not expected that changes to PM_{2.5} and PM₁₀ emissions levels associated with the proposed project would result in new violations of the federal air quality standards for the following reasons:

- The future truck traffic volumes along MCP would not exceed 10,000 ADT.
- The ambient PM₁₀ concentrations have not exceeded the 24-hour or annual federal standard within the past six years.
- Based on the projected PM₁₀ concentrations listed in the 2003 AQMP, the 24-hour PM₁₀ concentrations would be 38 percent of the federal standards by 2035.
- Based on the local monitoring data, the annual average PM_{2.5} concentrations within the project area would be reduced to below the federal standard by 2011.
- By 2035 the intersections within the proposed project area will be operating during the p.m. peak hour at LOS C through F without improvements. The proposed build alternatives would improve the LOS to A through D.

For these reasons, future new or worsened PM_{2.5} and PM₁₀ violations of any standards are not anticipated; therefore, the project meets the conformity hot-spot requirements in 40 CFR 93-116 and 93-123 for both PM_{2.5} and PM₁₀.

REFERENCES

United States Environmental Protection Agency (EPA). 2006a. "Transportation Conformity Guidance for Qualitative Hot-Spot Analyses in PM_{2.5} and PM₁₀ Nonattainment and Maintenance Areas" (EPA 420-B-06-902, March 2006).

United States Environmental Protection Agency (EPA). 2006b. Final Revisions to the National Ambient Air Quality Standards for Particulate Pollution (Particulate Matter). EPA Web site: www.epa.gov/oar/particulatepollution/naaqcrev2006.html, accessed on March 19, 2007.

VRPA Technologies, Inc., Mid County Parkway Traffic Technical Report, July 2007.

AIR QUALITY STUDY

MISSION BOULEVARD WIDENING

PM_{2.5} AND PM₁₀ ANALYSES

08-SBD-0-ONT

EA No. 08-924850

Submitted to:

State of California
Department of Transportation, District 8
464 West 4th Street
San Bernardino, California 92401-1400

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INTRODUCTION

LSA Associates, Inc. (LSA) prepared this Air Quality Technical Addendum for the Mission Boulevard Widening project in response to the United States Environmental Protection Agency (EPA) releasing new $PM_{2.5}$ ¹ and PM_{10} ² hot-spot analysis requirements in its March 10, 2006, final transportation conformity rule (71 FR 12468) (Final Rule). The 2006 Final Rule supersedes the Federal Highway Administration's (FHWA) September 12, 2001, "Guidance for Qualitative Project-Level Hotspot Analysis in PM_{10} Nonattainment and Maintenance Areas." This technical addendum was conducted following the procedures and methodology provided in the "Transportation Conformity Guidance for Qualitative Hot-Spot Analyses in $PM_{2.5}$ and PM_{10} Nonattainment and Maintenance Areas" (EPA/FHWA Guidance) (EPA, 2006a) developed by the EPA and the FHWA.

This $PM_{2.5}$ and PM_{10} analysis addresses the widening of Mission Boulevard, including the following components identified in the Regional Transportation Plan (RTP) and the Regional Transportation Improvement Program (RTIP): Project ID: SBD031315; Model No. 4159; Description: Mission Boulevard Grove to Haven, widen from four lanes to six lanes, landscaped median and storm drain (3.3 mi), (T21-#60) seg. 1 Archibald to Haven and seg. 2 – Grove to Archibald.

$PM_{2.5}$ AND PM_{10} HOT-SPOT METHODOLOGY

The new Final Rule establishes the transportation conformity criteria and procedures for determining which transportation projects must be analyzed for local air quality impacts in $PM_{2.5}$ and PM_{10} nonattainment and maintenance areas. The proposed project is in the South Coast Air Basin (Basin), which has been designated as a federal nonattainment area for $PM_{2.5}$ and PM_{10} ; therefore, a hot-spot analysis is required.

A hot-spot analysis is defined in the Code of Federal Regulations (CFR) (40 CFR 93.101) as an estimation of likely future localized pollutant concentrations and a comparison of those concentrations to the relevant air quality standards. A hot-spot analysis assesses the air quality impacts on a scale smaller than an entire nonattainment or maintenance area, such as for congested roadway intersections and highways or transit terminals. Such an analysis is a means of demonstrating that a transportation project meets Clean Air Act (CAA) conformity requirements to support State and local air quality goals with respect to potential localized air quality impacts. When a hot-spot analysis is required, it is included within the project-level conformity determination that is made by the FHWA or the Federal Transit Administration (FTA).

Section 176(c)(1)(B) of the CAA is the statutory criterion that must be met by all projects in nonattainment and maintenance areas that are subject to transportation conformity. Section 176(c)(1)(B) states that federally supported transportation projects must not "cause or contribute to any new violation of any standard in any area; increase the frequency or severity of any existing violation of any standard in any area; or delay timely attainment of any standard or any required interim emission reductions or other milestones in any area."

¹ Particulate matter less than 2.5 microns in diameter.

² Particulate matter less than 10 microns in diameter.

Ambient Air Quality Standards

PM_{2.5} nonattainment and maintenance areas are required to attain and maintain two ambient air quality standards (AAQS):

- **24-hour Standard:** 35 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). Based on 2004–2006 monitored data, the EPA tightened the PM_{2.5} 24-hour standard from 65 to 35 $\mu\text{g}/\text{m}^3$, effective December 2006. New area designations will become effective in early 2010 (EPA, 2006b).
- **Annual Standard:** 15.0 $\mu\text{g}/\text{m}^3$

The current 24-hour standard is based on a 3-year average of the 98th percentile of 24-hour PM_{2.5} concentrations. The current annual standard is based on a 3-year average of annual mean PM_{2.5} concentrations. A PM_{2.5} hot-spot analysis must consider both standards unless it is determined for a given area in which meeting the controlling standard would ensure that CAA requirements are met for both standards. The interagency consultation process should be used to discuss how the qualitative PM_{2.5} hot-spot analysis meets statutory and regulatory requirements for both PM_{2.5} standards, depending on the factors that are evaluated for a given project.

PM₁₀ nonattainment and maintenance areas are required to attain the following standard:

- **24-hour Standard:** 150 $\mu\text{g}/\text{m}^3$

The 24-hour PM₁₀ standard is attained when the average number of exceedances in the previous 3 calendar years is less than or equal to 1.0. An exceedance occurs when a 24-hour concentration of 155 $\mu\text{g}/\text{m}^3$ or greater is measured at a site. The annual PM₁₀ standard of 50 $\mu\text{g}/\text{m}^3$ is no longer used for determining the federal attainment status. The interagency consultation process should be used to discuss how the qualitative PM₁₀ hot-spot analysis meets statutory and regulatory requirements for the PM₁₀ standards, depending on the factors that are evaluated for a given project.

To meet statutory requirements, the 2006 Final Rule requires PM_{2.5} and PM₁₀ hot-spot analyses to be performed for Projects of Air Quality Concern (POAQC). The Final Rule states that projects not identified in 40 CFR 93.123(b)(1) as POAQC have met statutory requirements without any further hot-spot analyses (40 CFR 93.116[a]).

PM_{2.5} AND PM₁₀ HOT-SPOT ANALYSIS

Projects of Air Quality Concern

The first step in the hot-spot analysis is to determine whether a project meets the standard for a POAQC. The EPA specified in 40 CFR 93.123(b)(1) of the 2006 Final Rule that POAQC are certain highway and transit projects that involve significant levels of diesel vehicle traffic, or any other project that is identified in the PM_{2.5} and PM₁₀ State Implementation Plan (SIP) as a localized air quality concern. The 2006 Final Rule defines the POAQC that require a PM_{2.5} and PM₁₀ hot-spot analysis in 40 CFR 93.123(b)(1) as:

- i. New or expanded highway projects that have a significant number of or significant increase in diesel vehicles;

- ii. Projects affecting intersections that are at level of service (LOS) D, E, or F with a significant number of diesel vehicles, or those that will change to LOS D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project;
- iii. New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location;
- iv. Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location; or
- v. Projects in or affecting locations, areas, or categories of sites that are identified in the PM_{2.5} and PM₁₀ applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

Proposed Project

The City of Ontario (City) proposes to widen an approximately 2.15-mile segment of Mission Boulevard from four to six lanes (one additional lane in each direction) between Archibald Avenue and Haven Avenue. The proposed Mission Boulevard Widening project would increase traffic capacity and improve safety within the project limits. Figure 1 shows the regional location and project vicinity. Figure 2 shows the project location on an aerial photograph.

No Build Alternative. Under the No Build Alternative, there would be no improvements made to Mission Boulevard as proposed in the Build Alternative. However, all local and regional transportation improvements currently planned, programmed, and/or funded would continue through the appropriate planning processes.

Build Alternative. The following improvements are proposed as part of this project:

- Widen Mission Boulevard from four to six lanes from west of Archibald Avenue to west of Haven Avenue. The project will provide three lanes on Mission Boulevard in each direction within the project limits.
- Signalize the Turner Avenue/Mission Boulevard intersection to provide full access from Mission Boulevard to Turner Avenue, including a westbound left-turn lane.
- Improve the intersection of Archibald Avenue/Mission Boulevard to provide three through lanes in each direction and dual left-turn lanes in the northbound, eastbound, and westbound directions.
- Replace the existing traffic signal equipment at the intersection of Archibald Avenue/Mission Boulevard to meet the demands of the new intersection.
- Provide free right-turn lanes in the northbound and southbound directions from Archibald Avenue to Mission Boulevard.
- Install railroad gate arms and other railroad crossing safety equipment for the Union Pacific Railroad (UPRR) crossing on Archibald Avenue north of Mission Boulevard.
- Remove approximately 100 eucalyptus trees along the northern shoulder of westbound Mission Boulevard from just west of Haven Avenue to just west of Archibald Avenue.
- Raise the profile of Archibald Avenue at Mission Boulevard and north of UPRR to improve line-of-sight distance along Archibald Avenue.

Figure 1: Regional Location and Project Vicinity

Figure 2: Aerial Project Vicinity

- Install a raised median on Mission Boulevard from 770 feet (ft) west of Haven Avenue to Proforma Avenue.
- Install curbs and gutters, raised curb medians, sidewalks, storm drain facilities, landscaping, pavement striping markings, street lighting, and traffic signs.
- Raise the elevation of the Mission Boulevard westbound travel lanes from 1,200 ft west of Haven Avenue to 500 ft west of Archibald Avenue to eliminate water ponding and match the elevation of the eastbound travel lanes.
- Widen the existing Turner Avenue Bridge over the Lower Deer Creek Channel (or append a double box culvert to the existing bridge on the north side) and construct wing walls to join into the existing channel walls.
- Relocate existing utilities as needed.

The project will comply with the Americans with Disabilities Act (ADA) requirements. The majority of the proposed improvements will be within the existing right-of-way; however, some partial acquisitions will be required.

The proposed Build Alternative would meet the criteria in Item i above, as it would significantly increase the volume of heavy trucks along Mission Boulevard. Therefore, this project is considered to be a POAQC, and a qualitative project-level PM_{2.5} and PM₁₀ hot-spot analysis has been conducted to assess whether the project would cause or contribute to any new localized PM_{2.5} or PM₁₀ violations, increase the frequency or severity of any existing violations, or delay timely attainment of the PM_{2.5} and PM₁₀ AAQS.

Types of Emissions Considered

In accordance with the EPA/FHWA Guidance, this hot-spot analysis is based only on directly emitted PM_{2.5} and PM₁₀ emissions. Tailpipe, brake wear, and tire wear PM_{2.5} and PM₁₀ emissions were considered in this hot-spot analysis.

Vehicles cause dust from paved and unpaved roads to be re-entrained, or resuspended, in the atmosphere. According to the 2006 Final Rule, road dust emissions are only to be considered in PM_{2.5} and PM₁₀ hot-spot analyses if the EPA or the State air agency has made a finding that such emissions are a significant contributor to the PM_{2.5} and PM₁₀ air quality problem (40 CFR 93.102(b)(3)). The EPA or the California Air Resources Board (ARB) has not yet made such a finding of significance; therefore, re-entrained PM_{2.5} and PM₁₀ are not considered in this analysis.

Secondary particles formed through PM_{2.5} and PM₁₀ precursor emissions from a transportation project take several hours to form in the atmosphere, giving emissions time to disperse beyond the immediate project area of concern for localized analyses; therefore, they were not considered in this hot-spot analysis. Secondary emissions of PM_{2.5} and PM₁₀ are considered as part of the regional emission analysis prepared for the conforming RTP and Federal Transportation Improvement Program (FTIP).

According to the project schedule, the construction will not last more than 5 years, and construction-related emissions may be considered temporary; therefore, any construction-related PM_{2.5} and PM₁₀ emissions due to this project were not included in this hot-spot analysis. This project will comply with the South Coast Air Quality Management District (SCAQMD) Fugitive Dust Rules for fugitive dust during construction of this project. Excavation, transportation, placement, and handling of

excavated soils will result in no visible dust migration. A water truck or tank will be available within the project limits at all times to suppress and control the migration of fugitive dust from earthwork operations.

Analysis Method

According to hot-spot methodology, estimates of future localized PM_{2.5} pollutant concentrations need to be determined. This analysis makes those estimates by extrapolating present PM_{2.5} pollutant concentrations from air quality data measured at monitoring stations in the vicinity of the proposed project. The data from these stations are combined with projections from the 2003 Air Quality Management Plan (AQMP) prepared by the SCAQMD and examined for trends in order to predict future conditions in the project vicinity. Additionally, the impacts of the project and the likelihood of these impacts interacting with the ambient PM_{2.5} levels to cause hot spots are discussed.

Data Considered

Baseline PM_{2.5} Emissions. The closest air monitoring station to the project site is the Ontario–Francis Street Station. This monitoring station is located approximately 1 mile west of the proposed project within the Ontario Airport area. Therefore, the air quality concentrations monitored at this station are representative of the conditions within the project area.

The monitored PM_{2.5} concentrations at the Ontario–Francis Street Station are shown in Table A. These data show that the federal 24-hour PM_{2.5} AAQS (35 µg/m³) has been exceeded at this station in all of the last 6 years. In addition, the annual average PM_{2.5} AAQS (15 µg/m³) at this station was exceeded in all 6 years; however, the concentration continues to diminish every year.

Table A: Ambient PM_{2.5} Monitoring Data (µg/m³)

	2001	2002	2003	2004	2005	2006
Ontario–Francis Street Air Quality Monitoring Station						
3-year average 98th percentile	65	57	67	60	50	42
Exceeds federal 24-hour standard (35 µg/m ³)?	Yes	Yes	Yes	Yes	Yes	Yes
National annual average	26.5	25.4	23.8	20.9	18.8	15.6
Exceeds federal annual average standard (15 µg/m ³)?	Yes	Yes	Yes	Yes	Yes	Yes

Source: EPA Web site: <http://www.epa.gov/air/data/monvals.html?st=CA~California>, May 2007.

While the current levels of PM_{2.5} in the project vicinity are generally above the federal 24-hour standard, indications are that levels in the future will decrease. To estimate the future background PM_{2.5} concentrations, an exponential projection was made of the 3-year 98th percentile levels (the 2003 AQMP does not have any projections for PM_{2.5} concentrations). The exponential projection for the Ontario levels indicates that the PM_{2.5} concentration would be at the federal 24-hour PM_{2.5} standard of 35 µg/m³ in approximately 2010. This trend is consistent with the ARB's plan to achieve attainment for PM_{2.5} by 2010. The Initial Attainment SIP submittal to the EPA is anticipated by April 2008.

Baseline PM₁₀ Emissions. The monitored PM₁₀ concentrations at the Ontario–Francis Street Station, shown in Table B, indicate that neither the federal 24-hour PM₁₀ AAQS (150 µg/m³) nor the old federal annual AAQS (50 µg/m³) were exceeded between 2002 and 2006. These measured concentrations were significantly below the annual and 24-hour PM₁₀ standards.

Table B: Ambient PM₁₀ Monitoring Data (µg/m³)

	2001	2002	2003	2004	2005	2006
Ontario–Francis Street Air Quality Monitoring Station						
First Highest	166	91	149	93	77	78
Second Highest	120	85	104	87	74	75
Third Highest	91	74	79	73	71	74
Fourth Highest	86	72	73	68	70	73
No. of days above national 24-hour standard (150 µg/m ³)	1	0	0	0	0	0
National annual average	52	45	43	45	41	42
Exceeded national annual average standard (50 µg/m ³)?	Yes	No	No	No	No	No

Source: ARB Web site: <http://www.arb.ca.gov/adam/welcome.html>, May 2007.

While the current levels of PM₁₀ in the project vicinity are below federal standards, indications are that levels in the future will decrease even further. The draft 2007 AQMP (SCAQMD) reports that since the federal annual PM₁₀ standard has been revoked, the Basin is expected to be declared in attainment for the 24-hour federal PM₁₀ standard since 2000. Tables 2-23 and 2-25 on pages V-2-57 and V-2-58, respectively, in Appendix V of the approved 2003 AQMP show the projected maximum 24-hour average PM₁₀ concentrations for the Fontana area to be 47.2 and 45.0 µg/m³ for 2006 and 2010, respectively. This decrease in emissions in the future is largely due to continued improvements in emissions control technologies. To estimate what the background PM₁₀ concentration will be in 2025, a straight-line projection was made from the 2006 and 2010 values, predicting an ambient concentration of 70.5 and 36.8 µg/m³ by 2025 for the 24-hour and annual standards, respectively.

Transportation and Traffic Conditions

Existing average daily traffic (ADT) volumes, truck percentage, and average daily truck volumes for Mission Boulevard in the project area are shown in Table C. The existing traffic volumes along the local roads include 6.3–8.1 percent diesel trucks. The table indicates that Mission Boulevard currently experiences fewer than 10,000 trucks annual average daily traffic (AADT).

Table C: Existing (2006) Traffic Volumes

Roadway Link	AADT	% of Trucks	Truck AADT
Mission Boulevard East of Archibald Avenue	14,800	8.1	1,199
Mission Boulevard West of Archibald Avenue	16,800	6.3	1,058

Source: LSA Associates, Inc., February 2007.

Traffic Changes Due to the Proposed Project

The proposed project is a roadway widening project that increases the capacity of Mission Boulevard. This type of project improves roadway operations by reducing traffic congestion at existing interchanges and improving merge operations. Based on the Traffic Operations Analysis (LSA, February 2007), the proposed project would increase the traffic volumes along Mission Boulevard. However, the traffic volumes along Mission Boulevard would not exceed the 125,000 ADT threshold for a POAQC. In addition, although the percentage of truck traffic would exceed 8 percent, the total truck average daily trips would remain below the 10,000-vehicle threshold for POAQC. The future traffic volumes along Mission Boulevard are shown in Table D.

Table D: 2030 Average Daily Traffic Volumes (Truck Volumes)

Roadway Link	No Project Traffic Volumes	With Project Traffic Volumes
Mission Boulevard East of Archibald Avenue	43,000 (7,766)	51,176 (9,469)
Mission Boulevard West of Archibald Avenue	46,484 (7,893)	55,767 (9,711)

Source: LSA Associates, Inc., February 2007.

Table E shows the 2030 LOS at the existing and proposed intersections in the project area for the a.m. and p.m. peak hours. As shown in Table E, the proposed project would improve the LOS and reduce the delay at each of the intersections within the project area.

Table E: 2030 Without Project and 2030 With Project Intersection Levels of Service

Intersection		Without Project				With Project			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
1.	Archibald Ave./Mission Blvd.	<i>369.3</i>	<i>F</i>	<i>358.1</i>	<i>F</i>	23.6	C	37.3	D
2.	Business Pkwy./Mission Blvd.	12.5	B	<i>39.2</i>	<i>E</i>	11.3	B	26.8	D
3.	Turner Ave./Mission Blvd.	11.8	B	<i>500.8</i>	<i>F</i>	6.5	A	16.5	B
4.	Sterling Ave./Mission Blvd.	11.7	B	<i>37.6</i>	<i>E</i>	10.6	B	22.9	C
5.	Haven Ave./Mission Blvd.	<i>78.2</i>	<i>E</i>	<i>109.8</i>	<i>F</i>	<i>73.1</i>	<i>E</i>	<i>107.6</i>	<i>F</i>

Bold/Italic = Exceeds LOS standard

Delay = Average control delay in seconds (sec).

CONCLUSION

Transportation conformity is required under Section 176(c) of the CAA to ensure that federally supported highway and transit project activities are consistent with the purpose of the SIP. Conformity to the purpose of the SIP means that transportation activities will not cause new air quality violations, worsen existing violations, or delay timely attainment of the relevant AAQS. As required by the 2006 Final Rule, this qualitative PM_{2.5} hot-spot analysis demonstrates that this project

meets the CAA conformity requirements to support State and local air quality goals with respect to potential localized air quality impacts.

It is not expected that changes to PM_{2.5} and PM₁₀ emissions levels associated with the proposed project would result in new violations of the federal air quality standards for the following reasons:

- The future truck traffic volumes along Mission Boulevard would not exceed 10,000 ADT.
- The ambient PM₁₀ concentrations have not exceeded the 24-hour or annual federal standard within the past 5 years.
- Based on the projected PM₁₀ concentrations listed in the 2003 AQMP, the annual and 24-hour PM₁₀ concentrations would be 74 percent and 47 percent, respectively, of the federal standards by 2025.
- Based on the local monitoring data, the annual average PM_{2.5} concentrations within the project area would be reduced to below the federal standard by 2010.
- By 2030 the intersections within the proposed project area will be operating during the p.m. peak hour at LOS E through F without improvements. The proposed Build Alternative would improve the LOS to B through F.

For these reasons, future new or worsened PM_{2.5} and PM₁₀ violations of any standards are not anticipated; therefore, the project meets the conformity hot-spot requirements in 40 CFR 93-116 and 93-123 for both PM_{2.5} and PM₁₀.

REFERENCES

United States Environmental Protection Agency (EPA). 2006a. "Transportation Conformity Guidance for Qualitative Hot-Spot Analyses in PM_{2.5} and PM₁₀ Nonattainment and Maintenance Areas" (EPA 420-B-06-902, March 2006).

EPA. 2006b. Final Revisions to the National Ambient Air Quality Standards for Particulate Pollution (Particulate Matter). EPA Web site: www.epa.gov/oar/particulatepollution/naaqsrev2006.html, accessed on March 19, 2007.

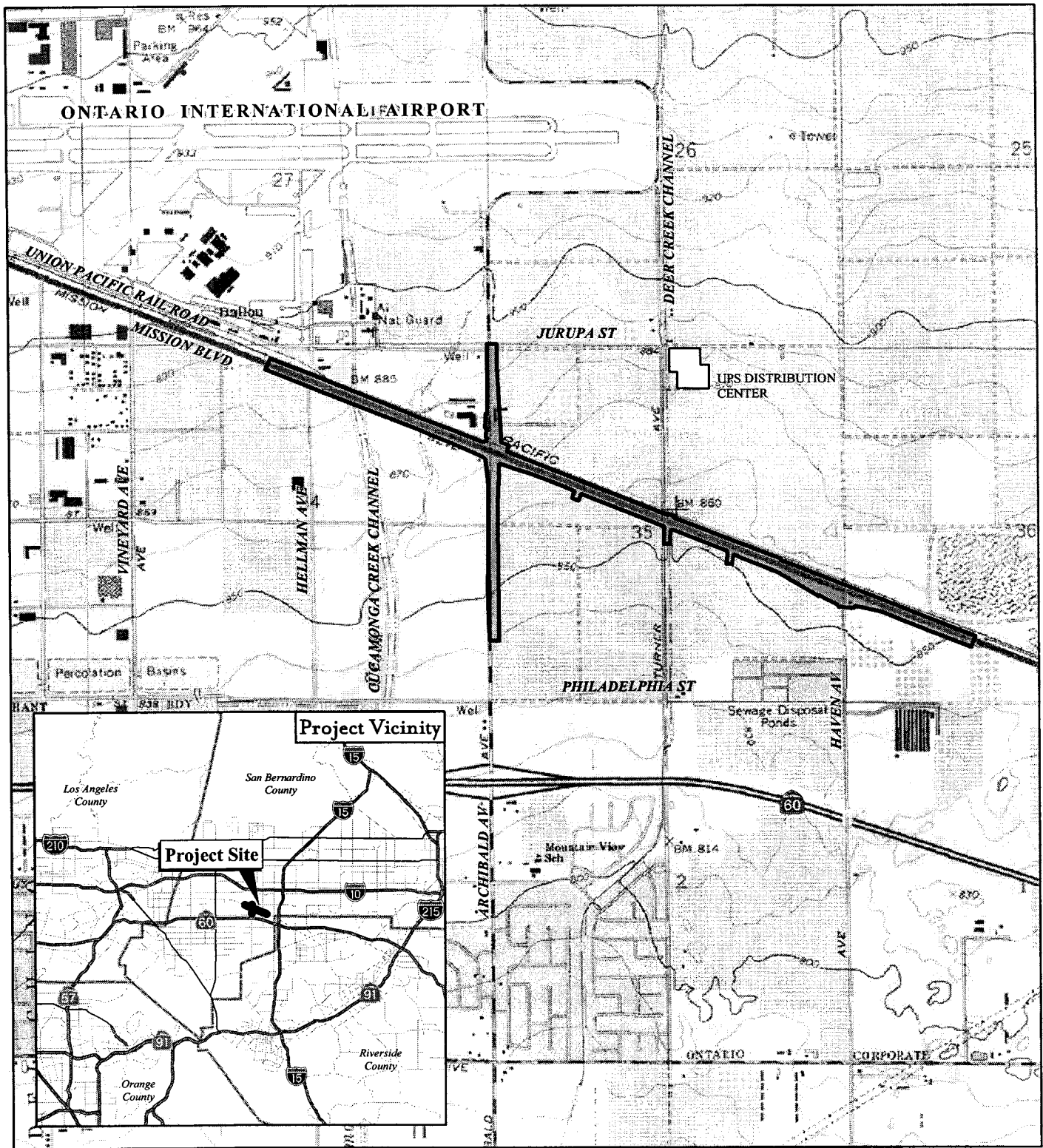



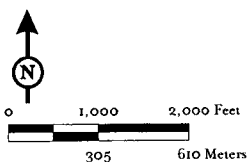
FIGURE 1

Mission Boulevard Widening
Archibald Avenue to Haven Avenue

Project Location
8-SBD-o-ONT
EA# o8-924850

LEGEND

 Project Location



SOURCE: USGS 7.5' QUAD - GUASTI ('81); CALIF.


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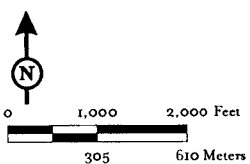


FIGURE 2

*Mission Boulevard Widening
Archibald Avenue to Haven Avenue
Aerial Project Vicinity
8-SBD-o-ONT
EA# 08-924850*

LEGEND

 Project Location



SOURCE: AirPhotoUSA, 2006.

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PM Conformity Hot Spot Analysis – Project Summary for Interagency Consultation

RTIP ID# <i>(required)</i> SBD031276				
Project Description <i>(clearly describe project)</i>				
Ranchero Road 7 th Avenue to Danbury, realign road and widen from 2 to 4 lanes and construct railroad undercrossing.				
Type of Project <i>(use Table 1 on instruction sheet)</i>				
Roadway realignment				
County	Narrative Location/Route & Postmiles			
San Bernardino	<p>The Project would begin at 7th Avenue and extend approximately 7,700 feet easterly to Danbury Avenue, with the existing Ranchero Road west of the railroad right-of-way reconstructed to a grade that would enable traffic to pass under the BNSF Railroad tracks.</p> <p>Caltrans Projects – EA# 965100</p> <p>¹Hot Spot Concern</p> <p>The FCAA requires a quantitative analysis of PM10 impacts if the EPA has prepared guidance for this analysis. At this time, a quantitative analysis methodology for assessment of PM10 impacts has not been released by the EPA. Therefore, a qualitative assessment is performed based on FHWA's "Guidance for Qualitative Project Level "Hot Spot" Analysis in PM10 Non-attainment and Maintenance Areas" and Caltrans' "Particulate Matter and Transportation Projects, an Analysis Protocol." This analysis concludes that it is highly unlikely that the project will cause an exceedance of the PM10 NAAQS in the vicinity of the project. Therefore, the project will not result in an adverse local PM10 impact.</p>			
Lead Agency: City of Hesperia				
Contact Person	Phone#	Fax#	Email	
Dave Reno	760-947-1253	760-947-1221	dreno@cityofhesperia.us	
Hot Spot Pollutant of Concern <i>(check one or both)</i> PM2.5 Not required PM10 X ¹				
Federal Action for which Project-Level PM Conformity is Needed <i>(check appropriate box)</i>				
Categorical Exclusion (NEPA)	X	EA or Draft EIS	FONSI or Final EIS	PS&E or Construction
Other				
Scheduled Date of Federal Action: 07/08/09				
Current Programming Dates <i>as appropriate</i>				
	PE/Environmental	ENG	ROW	CON
Start	N/A	Prior	06/07	07/08
End	N/A	Prior	06/07	08/09

Project Purpose and Need (Summary): *(attach additional sheets as necessary)*

The purpose of the proposed Ranchero Road project is to provide the City of Hesperia with an additional arterial level east-west access route across the City, consistent with the City's adopted 2001 update of the Circulation Element of the General Plan. More specifically, the project's purpose is to:

- Improve the City's overall circulation system by providing an additional grade separated crossing of the BNSF railroad right-of-way/tracks, with an arterial road that would connect the City from its boundary on the east to the I-15 freeway on the west; and
- Improve traffic circulation in the City by reducing traffic congestion on Main Street.

Surrounding Land Use/Traffic Generators *(especially effect on diesel traffic)*

Surrounding land uses consist of developed residential neighborhoods and portions of the road are within the Antelope Valley Wash. Other land uses in the vicinity include the Hesperia Airport to the south and two water reservoirs (tanks) and a cell tower northwest of the railroad right-of-way. Areas west of the railroad right-of-way and east of the wash are zoned single-family residential.

Opening Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

According to the City of Hesperia's Circulation Element, Ranchero Road is not designated as a truck route. Therefore, truck traffic is not anticipated. Refer to the Tables below for existing LOS and anticipated LOS with improvements.

Current Level of Service

		Peak Hour Delay (Measured in Seconds)			
Intersection	Traffic Control	AM	LOS	PM	LOS
Mariposa Road (NS) @ Ranchero Road (EW)*	All Way Stop	23.4	C	88.4	F
Cottonwood Avenue (NS) @ Ranchero Road (EW)	All Way Stop	10.1	B	16.1	C
Balsam Avenue (NS) @ Main Street (EW)*	Cross Street Stop	99.9 ¹	F	99.9 ¹	F
7 th Avenue (NS) @ Main Street (EW)	Traffic Signal	22.3	C	19.4	B
7 th Avenue (NS) @ Ranchero Road (EW)	All Way Stop	8.7	A	11.7	B
Summit Valley Road (NS) @ Ranchero Road (EW)	All Way Stop	11.6	B	11.8	B
C Avenue (NS) @ Main Street (EW)	All Way Stop	35.1	D	36.7	D
C Avenue (NS) @ Ranchero Road (EW)	All Way Stop	11.3	B	11.8	B
Danbury Avenue (NS) @ Ranchero Road (EW)	All Way Stop	11.8	B	13.5	B
I Avenue (NS) @ Main Street (EW)	All Way Stop	24.6	C	27.1	C

* = Current condition is no traffic signal and traffic signal is warranted.

1 = Delay high, intersection unstable, Level of Service

Level of Service– Year 2010 With Proposed Project Improvements

		Peak Hour Delay (Measured in Seconds)			
Intersection	Traffic Control	AM	LOS	PM	LOS¹
Mariposa Road (NS) @ Ranchero Road (EW)	Traffic Signal	8.2	A	5.9	A
Cottonwood Avenue (NS) @ Ranchero Road (EW) *	Traffic Signal	13.2	B	13.4	B
Balsam Avenue (NS) @ Main Street (EW)	Traffic Signal	9.8	A	15.6	B
7 th Avenue (NS) @ Main Street (EW)	Traffic Signal	21.3	C	16.8	B
7 th Avenue (NS) @ Ranchero Road (EW) *	Traffic Signal	19.4	B	16.0	B
Summit Valley Road (NS) @ Ranchero Road (EW) *	Traffic Signal	16.0	B	13.9	B
C Avenue (NS) @ Main Street (EW)	Traffic Signal	33.1	C	34.8	C
Danbury Avenue (NS) @ Ranchero Road (EW)	Cross Street Stop	15.8	C	20.6	C
I Avenue (NS) @ Main Street (EW)	Traffic Signal	25.0	C	29.0	C

* = Current condition (Year 2004) is no traffic signal, but traffic signal is projected to be warranted in 2010.

1 = LOS Projections based on completion of proposed project improvements and recommended traffic signals are installed.

RTP Horizon Year / Design Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

According to the City of Hesperia's Circulation Element, Ranchero Road is not designated as a truck route. Therefore, truck traffic is not anticipated. However, Year 2030 LOS with improvements is indicated below.

Level of Service – Year 2030 With Proposed Project Improvements

Intersection	Traffic Control	Peak Hour Delay (Measured in Seconds)			
		AM	LOS	PM	LOS ¹
Mariposa Road (NS) @ Ranchero Road (EW)	Traffic Signal	35.1	D	26.9	C
Cottonwood Avenue (NS) @ Ranchero Road (EW)	Traffic Signal	15.5	B	12.5	B
Balsam Avenue (NS) @ Main Street (EW)	Traffic Signal	11.5	B	10.5	B
7 th Avenue (NS) @ Main Street (EW)	Traffic Signal	25.4	C	20.5	C
7 th Avenue (NS) @ Ranchero Road (EW)	Traffic Signal	18.6	B	22.4	C
Summit Valley Road (NS) @ Ranchero Road (EW)	Traffic Signal	20.2	C	23.0	C
C Avenue (NS) @ Main Street (EW)	Traffic Signal	38.3	D	40.1	D
Danbury Avenue (NS) @ Ranchero Road (EW) *	Traffic Signal	20.3	C	20.6	C
I Avenue (NS) @ Main Street (EW)	Traffic Signal	25.0	C	29.0	C

* = Current condition (Year 2004) is no traffic signal, but traffic signal is projected to be warranted in 2030.

1 = LOS Projections based on completion of proposed project improvements and recommended traffic signals are installed.

Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

The proposed project is not the development of a interchange or intersection. The proposed project is the realignment of Ranchero Road from 7th Avenue to Danbury, widening from 2 to 4 lanes and the construction of a Railroad undercrossing.

RTP Horizon Year / Design Year: If facility is an interchange (s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

The proposed project is not the development of a interchange or intersection. The proposed project is the realignment of Ranchero Road from 7th Avenue to Danbury, widening from 2 to 4 lanes and the construction of a Railroad undercrossing.

Describe potential traffic redistribution effects of congestion relief (impact on other facilities)

Refer to comments section below.

Comments/Explanation/Details *(attach additional sheets as necessary)*

The BNSF Railroad bisects the City of Hesperia in a north/south direction. There are two crossings over the railroad to serve the City's approximately 78,000 (according to the 2005 US Census Bureau population estimates) residents; one at Bear Valley Road, the northern boundary of the City, and one at Main Street which provides the only centrally located east-west corridor to serve the entire City. According to City of Hesperia data, approximately 47 percent of the City's residents live on the east side of the BNSF line. Development of the proposed project will improve the City's overall circulation system by providing an additional grade-separated crossing of the BNSF railroad right-of-way/tracks, with an arterial road that would connect the City from its boundary on the east to the I-15 freeway on the west; and improve traffic circulation in the City by reducing traffic congestion on Main Street.

Air Quality report attached titled: Air Quality Assessment For: Ranchero Road Grade Separation Project (Seventh Avenue to Danbury Avenue) City of Hesperia.

PM Conformity Hot Spot Analysis – Project Summary for Interagency Consultation

RTIP ID# <i>(required)</i> ORA120316				
Project Description <i>(clearly describe project)</i> <p>The City of Laguna Niguel proposes to construct improvements that will widen Crown Valley Parkway from the intersection of Cabot Road to the northbound Interstate 5 (I-5) ramp intersection in the City of Mission Viejo. The objective of the project is to improve the level of service (LOS) on the Crown Valley Parkway roadway segment to meet the existing and forecasted volumes of traffic in the surrounding area. The project is needed to address existing and forecast operational deficiencies on Crown Valley Parkway between the Cabot Road intersection and the northbound I-5 ramp intersection. Without this project, the p.m. peak-hour LOS of the southbound ramp intersection is forecast to degrade to LOS F by 2030. The southbound I-5 ramp intersection currently operates at LOS F.</p> <p>The proposed project consists of widening three bridges on the south (eastbound side) that span over Camino Capistrano and the Orange County Transportation Authority (OCTA) Metrolink Railroad, Oso Creek, and I-5. The widening would lengthen the existing right-turn lane onto the southbound I-5 on-ramp and add a lane to the northbound I-5 entrance ramp intersection. At the intersection of Forbes Road, improvements will include construction of a second left-turn lane in each direction of travel on Crown Valley Parkway. Forbes Road will be widened in the southbound direction to accept the dual left turns from westbound Crown Valley Parkway. Forbes Road south of Crown Valley Parkway will be widened, and one southbound lane will be added. The roadway segment between Cabot Road and Forbes Road would be modified with a proposed landscaped median that will separate eastward and westward traffic.</p>				
Type of Project <i>(use Table 1 on instruction sheet)</i> Change to existing regionally significant street				
County Orange	Narrative Location/Route & Postmiles Crown Valley Parkway Caltrans Projects – EA# OH86OK			
Lead Agency: City of Laguna Niguel				
Contact Person Dave Rogers	Phone# 949-362-4337	Fax#	Email drogers@ci.laguna_niguel.ca.us	
Hot Spot Pollutant of Concern <i>(check one or both)</i> PM2.5 <input checked="" type="checkbox"/> PM10 <input checked="" type="checkbox"/>				
Federal Action for which Project-Level PM Conformity is Needed <i>(check appropriate box)</i>				
<input checked="" type="checkbox"/> Categorical Exclusion (NEPA)	<input type="checkbox"/> EA or Draft EIS	<input type="checkbox"/> FONSI or Final EIS	<input type="checkbox"/> PS&E or Construction	<input type="checkbox"/> Other
Scheduled Date of Federal Action: Dec 2007				
Current Programming Dates <i>as appropriate</i>				
	PE/Environmental	ENG	ROW	CON
Start	Jun 2006	Dec 2007	Sep 2008	Sep 2009
End	Oct 2007	Jun 2009	May 2009	Dec 2010

<p>Project Purpose and Need (Summary): <i>(attach additional sheets as necessary)</i></p> <p>Need</p> <p>The project is needed to address existing and forecast operational deficiencies on Crown Valley Parkway between the Cabot Road intersection and the northbound Interstate 5 (I-5) ramp intersection. Without this project, the PM peak-hour level of service (LOS) of the southbound ramp intersection is forecast to continue operating at LOS F by year 2030 but with extended delay. The southbound I-5 ramp intersection currently operates at LOS F. Existing and forecast interchange congestion is the direct byproduct of inadequate vehicle queue storage. Under current conditions, existing eastbound Crown Valley Parkway peak-hour vehicle queuing eliminates efficient access to both the southbound I-5 entrance ramp and the northbound I-5 loop entrance ramp, thereby degrading interchange operations by forcing turning vehicles to be stored in through lanes. Also, eastbound and westbound left-turn vehicle queues at the Forbes Road/Crown Valley Parkway intersection are forecast to exceed existing queue storage capacity, which will result in vehicles queuing onto through lanes and further degrade arterial and interchange traffic operations.</p> <p>Purpose</p> <p>The purpose of the I-5 /Crown Valley Parkway interchange project is to improve existing and future access to I-5, reduce congestion along Crown Valley Parkway, and provide for gateway improvements into the City of Laguna Niguel.</p>
<p>Surrounding Land Use/Traffic Generators <i>(especially effect on diesel traffic)</i></p> <p>The land uses within the vicinity of the Crown Valley Parkway project include commercial and light industrial developments. The closest sensitive land uses are residences to the west at a distance of approximately 400 feet.</p>
<p>Opening Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility</p> <p>LOS E/D, Total AADT = 68,558*, Truck AADT = 2,400* (3.5%), Year 2003, Along Crown Valley Parkway</p> <p>* These traffic volumes apply to both the No Build and Build Alternatives.</p>
<p>RTP Horizon Year / Design Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility</p> <p>LOS E/D, Total AADT = 86,976*, Truck AADT = 3,044* (3.5%), Year 2030, Along Crown Valley Parkway</p> <p>* These traffic volumes apply to both the No Build and Build Alternatives.</p>

PM Conformity Hot Spot Analysis – Project Summary for Interagency Consultation

<p>Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT</p> <p>RTP Horizon Year / Design Year: If facility is an interchange (s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT</p>
<p>Describe potential traffic redistribution effects of congestion relief <i>(impact on other facilities)</i></p> <p>See attached analysis</p>
<p>Comments/Explanation/Details <i>(attach additional sheets as necessary)</i></p> <p>See attached analysis</p>

Particulate Matter (PM₁₀ and PM_{2.5}) Analysis

The proposed project is located within a nonattainment area for federal PM_{2.5} and PM₁₀ standards. Therefore, per 40 CFR, Part 93, analyses are required for conformity purposes. However, the EPA does not require hot-spot analyses, qualitative or quantitative, for projects that are not listed in Section 93.123(b)(1) as an air quality concern. The project does not qualify as a project of air quality concern (POAQC) because of the following reasons:

- i. The proposed project is not a new or expanded highway project. The proposed project is an operational improvement project that does not increase the capacity of Interstate 5 (I-5). This type of project improves roadway operations by reducing traffic congestion and improving intersection operations. Based on the Traffic Analysis (LSA, June 2007), the proposed project would improve operations along Crown Valley Parkway. The traffic volumes along Crown Valley Parkway would not exceed the 125,000 average daily trips threshold for a POAQC. In addition, based on the I-5 fleet mix, the truck volumes along Crown Valley Parkway would not exceed 10,000 daily trips or 8 percent of the traffic volume. The future traffic volumes along Crown Valley Parkway are shown in Table A.
- ii. The proposed project does not affect intersections that are at level of service (LOS) D, E, or F with a significant number of diesel vehicles. Based on the Traffic Analysis, the proposed project would reduce the delay and improve the LOS at intersections within the project vicinity. The LOS conditions in the project vicinity with and without the proposed project are shown in Table B.
- iii. The proposed project does not include the construction of a new bus or rail terminal.
- iv. The proposed project does not expand an existing bus or rail terminal.

Therefore, the proposed project meets Clean Air Act (CAA) requirements and 40 CFR 93.116 without any explicit hot-spot analysis. The proposed project would not create a new, or worsen an existing, PM₁₀ or PM_{2.5} violation.

Table A: Average Daily Traffic Volumes (Total AADT/Truck AADT)

Roadway Link	Existing Volumes (Total AADT/Truck AADT)	2030 Volumes (Total AADT/Truck AADT)
Crown Valley Parkway between Cabot Road and Forbes Road	57,000 (1,995)	67,931 (2,378)
Crown Valley Parkway between Forbes Road and Kaleidoscope Road	66,501 (2,328)	82,279 (2,880)
Crown Valley Parkway between Kaleidoscope Road and Puerta Real	68,558 (2,400)	86,976 (3,044)

Source: LSA Associates, Inc., June 2007.

AADT = annual average daily traffic

Table B: 2030 Intersection LOS Summary

Intersection	Alternatives							
	No Build				Build			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS
1. Cabot Rd./Crown Valley Pkwy.	0.74	C	0.78	C	0.74	C	0.78	C
2. Forbes Rd./Crown Valley Pkwy.	0.64	B	0.73	C	0.60	A	0.71	C
3. I-5 SB ramps/Crown Valley Pkwy.	0.71	C	0.98	E	0.71	C	0.90	D
4. I-5 NB ramps/Crown Valley Pkwy.	0.73	C	0.93	E	0.73	C	0.75	C
5. Kaleidoscope Rd./Crown Valley Pkwy.	0.66	B	0.69	B	0.66	B	0.69	B
6. Puerta Real/Crown Valley Pkwy.	0.69	B	0.80	C	0.69	B	0.80	C

Source: LSA Associates, Inc., June 2007.

ICU = intersection capacity utilization

LOS = level of service

NB = northbound

SB = southbound

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RTIP ID# (<i>required</i>) 35556				
Project Description (<i>clearly describe project</i>) IN VICTORVILLE FROM 0.3 KM N/O MOJAVE DR. IC TO STODDARD WELLS ROAD – ADD N/B MIXED FLOW LANE WITH AUX. LANE, RECONSTRUCT "D" ST. AND "E" ST. INTERCHANGE(IC) AND STODDARD WELLS IC (PHASE 3)				
Type of Project (<i>use Table 1 on instruction sheet</i>) RECONFIGURE EXISTING INTERCHANGES				
County SAN BERNARDINO		Narrative Location/Route & Postmiles SBd /15/PM 41.9-46.0 Caltrans Projects – EA# 355560		
Lead Agency: CALTRANS				
Contact Person Tony Louka		Phone# 909-383-6385	Fax# 909-383-6494	Email Tony_louka@dot.ca.gov
Hot Spot Pollutant of Concern (<i>check one or both</i>) PM2.5 PM10 X				
Federal Action for which Project-Level PM Conformity is Needed (<i>check appropriate box</i>)				
Categorical Exclusion (NEPA)	EA or Draft EIS	X FONSI or Final EIS	PS&E or Construction	Other
Scheduled Date of Federal Action:				
Current Programming Dates <i>as appropriate</i>				
	PE/Environmental	ENG	ROW	CON
Start	September 2005			
End	03-25-2008			

project Purpose and Need (Summary): *(attach additional sheets as necessary)*

It is proposed to reconstruct three interchanges (EA 355560) and upgrade roadway standards on Interstate Route 15 (I-15) between Mojave Drive Interchange KP 67.4 (PM41.9) and 1.6km north of the existing Stoddard Wells Road Over-crossing, KP 74.0 (PM 46.0) to meet current standards, improve operational efficiency, and enhance safety. The major engineering features include: reconstruction of "D" Street and "E" Street interchanges; relocation of Stoddard Wells Road interchange; widening the Mojave River Bridge and Victorville Separation and Overhead; upgrading geometric for 4.4 km of mainline roadway realign the east frontage road; and constructing the west frontage road. "No-build" and "Interchange Reconstruction" are the only viable alternatives currently under consideration.

The Purpose and Need for the Interchange Reconstruction, was developed in cooperation with the FHWA. The purpose of the project is to upgrade the facility to meet current standards and improve operational characteristics that contribute to safety problems and operational inefficiencies. Three general purpose objectives were adopted by the project development team to assess the viability of alternatives in fulfilling the projects

- Upgrade interim non-standard roadway features to current highway standards;
- Improve operational characteristics of the "D" Street, "E" Street, and Stoddard Wells Road interchanges that address accident concentrations and operational inefficiencies;
- Enhance safety by improving the operational characteristics of the interchanges.

Traffic data for existing facility (mainline and interchanges) within the project limits are shown in appropriate cells below for existing year 2006, year open to traffic 2012 and the Design/horizon year 2030. A simple and concise expression of the basic factors controlling the design of the freeway is shown by the design designation below.

Traffic

ADT (2010) = 70,000 D = 60%
 ADT (2030) = 120,000 T = 10%
 DHV = 10,000 V = 130km/h

Where: ADT = Average daily traffic for the construction year and design year; DHV=The two-way design hourly volume; D = The percentage of DHV in the direction of heavier flow; T = % trucks in the DHV; and V=design speed.

MAINLINE (I-15) NORTHBOUND EXISTING YEAR 2005

LOCATION	AM Peak	PM Peak	N _F	AM Peak LOS	PM Peak LOS	Truck %
Mojave Drive to "D" Street	5147	3632	3	D	C	10%
"E" Street to Stoddard Wells	4546	2562	2	F	C	10%
Stoddard Wells Road to SR-18 IC	4350	2342	2	F	C	10%

MAINLINE (I-15) SOUTHBOUND EXISTING YEAR 2005

LOCATION	AM Peak	PM Peak	N _F	AM Peak LOS	PM Peak LOS	Truck %
SR-18 IC to Stoddard Wells Road	2342	4352	2	C	F	10%
Stoddard Wells to "E" Street	2545	4546	2	C	F	10%
"D" Street to Mojave Drive	3539	5247	3	C	D	10%

Surrounding Land Use/Traffic Generators (especially effect on diesel traffic)

The existing facility consists of 3 mixed flow in each direction after completion of phase, 1 and 2, which provided adding a lane in north and south direction. The proposed interchange Reconstruction would configure interchange and upgrade nonstandard roadway features, improve operational deficiency and safety. The City's General Plan Land Use Map identifies the areas within the project study area adjacent to I-15 and within the project limit is primarily urbanized consisting of residential, general commercial and light industrial uses.

Opening Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

It is anticipated that the project would be open to traffic in the year 2012 and the traffic for "Build" and "No-Build" is the same as provided by Traffic forecasting Unit Caltrans District 8

MAINLINE (I-15) NORTHBOUND YEAR 2012 BUILD

LOCATION	AM Peak	PM Peak	N _F	AM Peak LOS	PM Peak LOS	Truck %
Mojave Drive to "D" Street	5435	3832	3	D	C	10%
"E" Street to Stoddard Wells	4831	2811	3	D	B	10%
Stoddard Wells Road to SR-18 IC	4626	2607	3	D	B	10%

MAINLINE (I-15) SOUTHBOUND YEAR 2012 BUILD

LOCATION	AM Peak	PM Peak	N _F	AM Peak LOS	PM Peak LOS	Truck %
SR-18 IC to Stoddard Wells Road	2607	4676	3	B	C	10%
Stoddard Wells to "E" Street	2831	4831	3	B	D	10%
"D" Street to Mojave Drive	3708	5535	4	B	C	10%

Source: The above traffic information is reproduced as given by Caltrans Traffic Forecasting District 8

RTP Horizon Year / Design Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

The Design/ Horizon year for the project is 2030 and the projected traffic figures are taken from the information provided by Caltrans Forecasting/Traffic Analysis Unit, District 8 (San Bernardino)

MAINLINE (I-15) NORTHBOUND YEAR 2030 BUILD

LOCATION	AM Peak	PM Peak	N _F	AM Peak LOS	PM Peak LOS	Truck %
Mojave Drive to "D" Street	5630	3660	3	D	C	10%
"E" Street to Stoddard Wells	5800	3800	3	D	C	10%
Stoddard Wells Road to SR-18 IC	5800	3600	3	D	C	10%

See other traffic data Tables given on the last sheet

Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

NONE available

RTP Horizon Year / Design Year: If facility is an interchange (s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

Surface Street Traffic Analysis (Truck %=10 for each Case as assumed by Caltrans Traffic Forecasting)

LOCATION	BUILD-2030				NO BUILD-2030			
	East Bound ADT	West Bound ADT	AM Peak EB/WB ADT	PM Peak EB/WB ADT	East Bound ADT	West Bound ADT	AM peak EB/WB ADT	PM Peak EB/WB ADT
EB "D" Street beyond NB off ramp	12000	12000	1000/1250	1600/1200	12000	12000	1000/1400	1400/1000
EB "D" Street Before SB off ramp	12000	12000	950/1400	1600/1100	12000	12000	1200/1400	1400/1200
Stoddard Wells Rd East of NB off Ramp	6300	7300	520/590	660/600	5000	5000	400/	500/
Stoddard Wells Road West of SB on ramp	6300	7300	660/620	580/880	5000	5000	500/	400/

NOTES: The East and West bound traffic on Stoddard Wells Rd is not give in Traffic Analysis diagram for Forecasted year 2030. It is presumed that the total ADT on NB on and off ramps traffic is adopted from Traffic Study Report traffic Diagram (October, 2005)

Describe potential traffic redistribution effects of congestion relief (impact on other facilities)

In accordance with San Bernardino and Riverside Counties Congestion Management plans (CMP), the I-15 route concept is level of service (LOS) "E" for the urbanized portion of the route. In the rural areas, the route concept is LOS of "C" and in the transition areas where the route changes from rural to urban, the concept is "D". LOS E is the level of service in 2025 route concept adopted by Caltrans District 8 for the segment of I-15 affected by this project. The City of Victorville's target for peak hour intersection operation is LOS E or better and the threshold of significance occurs when the addition of project generated trips causes an intersection, operating at LOS E or better, to operate at LOS F. The LOS performance for freeway operations and ramp/ local street shall be considered deficient in 2030 if it operates lower than LOS E. The heaviest traveled segment of I-15 within the project study area is between Mojave Drive IC and D and E Street IC. For "No- build" condition in design year 2030 the LOS is F between D and E Street IC but with project implementation the LOS is C/D. The SR-18 which is also "D" Street within the project area would be relocated to connect with the planned future new SR-18 Interchange located north of Stoddard Wells Road IC along I-15. The relocation of SR-18, which would remove SR-18 traffic load from "D" street, which currently is serving the traffic from Highway-18. This redistribution of traffic would further ease up congestion and delays on segment of I-15 and the three interchanges within the proposed project limits.

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Comments/Explanation/Details (attach additional sheets as necessary)

The proposed project has STIP funding. The project is scheduled to complete construction by 11/08/2012 with RTL date of 04/13/2010. The PA&ED and PS&E are respectively 03/12/2008 and 11/10/2009. The implementation of the project would reduce delays and congestions at the local streets ramp intersections. Slowing down of traffic on mainline freeway due to insufficient merge diverge lengths and climbing length for heavy truck in SB direction entering mainline from existing "E" street on-ramp. Widen of freeway road bed and upgrading of roadway standards which would allow mainline traffic flow to move uniformly rather in an unsafe and chaotic manner due to narrowing of I-15 mainline road bed within the project study area. The proposed project would accommodate future projected traffic and improve operational efficiency of the mainline and intersections by increasing the speed on mainline and reducing congestion and delays and idling of vehicle on ramps intersections which would improve air quality by reducing exhaust emissions of criteria pollutant (CO, PM2.5, PM-10) and MSAT from vehicles. As can be seen from Tables presented that there is no significant increase in diesel truck vehicles volumes related to the project which would degrade or affect the level of service (LOS) of project intersections/interchanges. The truck percentage in ADT remain as 10% with and without the project. It can be seen that project implementation would improve the LOS of mainline and interchanges. This is not a Project of Air Quality concern as defined in 40 CFR 93.123(b)(1).

Continued from page 3 (RTP Horizon year/Design Year)

MAINLINE (I-15) SOUTHBOUND YEAR 2030 BUILD						
LOCATION	AM Peak	PM Peak	N _F	AM Peak LOS	PM Peak LOS	Truck %
SR-18 IC to Stoddard Wells Road	3600	5800	3	C	D	10%
Stoddard Wells to "E" Street	3900	5800	3	C	D	10%
"D" Street to Mojave Drive	4300	6500	4	C	D	10%

MAINLINE (I-15) NORTHBOUND YEAR 2030 NO-BUILD						
LOCATION	AM Peak	PM Peak	N _F	AM Peak LOS	PM Peak LOS	Truck %
Mojave Drive to "D" Street	6400	4500	3	E	C	10%
"E" Street to Stoddard Wells	5800	3800	3	D	C	10%
Stoddard Wells Road to SR-18 IC	5800	3600	3	D	C	10%

MAINLINE (I-15) SOUTHBOUND YEAR 2030 NO-BUILD						
LOCATION	AM Peak	PM Peak	N _F	AM Peak LOS	PM Peak LOS	Truck %
SR-18 IC to Stoddard Wells Road	3600	5800	3	C	D	10%
Stoddard Wells to "E" Street	3900	5800	3	C	D	10%
"D" Street to Mojave Drive	4300	6500	4	C	D	10%

Source: The above traffic information is reproduced as given by Caltrans Traffic Forecasting District 8

4.5 REVIEW OF PM HOT SPOT INTERAGENCY REVIEW FORMS

RTIP ID# (required) ORA120326

Project Description:

Two interchange improvement alternatives have been proposed to meet the project purpose and need. In addition, a no build alternative is under consideration. All three alternatives are evaluated in this Environmental Impact Report/Environmental Assessment (EIR/EA). The potential interchange improvement alternatives are as follows:

No Build Alternative: No changes to the existing roadway configuration are anticipated for the analysis of this alternative. Ortega Highway and the surrounding land uses in the interchange area would continue to exist and operate as they do today. Figure ES-3 displays the existing conditions associated with the No Build Alternative.

It is anticipated that I-5 may be widened in the future (as a separate project) by providing one additional HOV lane in each direction. The potential future widening of I-5 in the interchange area would occur independently if the No Build Alternative were selected. Currently, the Ortega Highway overcrossing over I-5 does not provide enough span length (horizontal clearance) to accommodate the future widening of I-5.

If the No Build Alternative is selected in lieu of one of the proposed build alternatives, the purpose and need for the project would not be achieved, and impacts related to increased traffic congestion, the inability of the interchange to accommodate projected year 2030 traffic levels, ongoing traffic safety issues, nonstandard design features, and air quality effects (because of increased traffic congestion) would be exacerbated in the project area. In addition, the Ortega Highway overcrossing over I-5 would exist as it is currently designed and would not provide the required span length to accommodate the future widening of I-5; therefore, the Ortega Highway overcrossing would ultimately need to be reconstructed as a separate project if the I-5 widening project is implemented.

Alternative 3 (Locally-Preferred Alternative) – Reconfigured Del Obispo Street Intersection and Single Cloverleaf Interchange: This alternative realigns Ortega Highway west of the I-5 southbound ramps and widens the I-5 southbound off-ramp (refer to Figure ES-4). Proposed improvements would realign Del Obispo Street and Ortega Highway so that the eastern branch of Ortega Highway curves into Del Obispo Street, which would form a new intersection south of the existing intersection. A new curved roadway would also be constructed, which would connect the current El Camino Real/Ortega Highway intersection with this new intersection. In addition, Ortega Highway would be widened and restriped east of the proposed northbound I-5 freeway ramps to accommodate the eastbound and westbound through/turn lanes and to allow for lane widening to standard widths.

The east side of the interchange would feature a partial cloverleaf ramp configuration. The current I-5 northbound off-ramp would be realigned to the east to provide room for a loop ramp in the southeast quadrant of the interchange. This loop ramp would be used for eastbound traffic to access northbound I-5 without having to make a left turn onto the current northbound on-ramp, which would be retained for westbound traffic turning right. The current intersection would be simplified by the removal of this left-turn movement, and it would be moved east, which would increase the spacing between it and the intersection of Ortega Highway and the southbound I-5 ramps. In addition, the northbound on-ramp would be modified to accommodate an acceleration lane for the proposed loop on-ramp. A retaining wall would be placed along the outside of the reconfigured northbound off-ramp to minimize right-of-way (ROW) impacts on the adjacent business park.

The Ortega Highway/I-5 freeway overcrossing would be replaced to allow for additional full-width standard¹ lanes (8 total) as well as a longer span length to provide additional space underneath to accommodate the proposed northbound loop on-ramp and for possible future widening of the I-5 freeway. The increased span length would result in a deeper bridge section, thus requiring the bridge profile to be raised to maintain the minimum required vertical clearance.

It is anticipated that the I-5 freeway may be widened in the future (as a separate project) by providing one additional high-occupancy vehicle (HOV) lane in each direction. Alternative 3 has been designed to accommodate this future widening. The cloverleaf on-ramp proposed as part of Alternative 3 was designed such that a reduction of the ramp radius would not be required to provide room for the additional I-5 HOV lanes. In the event that the I-5 freeway is widened in the future, the acceleration lane for the proposed loop on-ramp may be revised to accommodate the future freeway HOV lanes while still meeting minimum radius standards for the loop portion of the ramp. Similarly, the proposed northbound on-ramp would require minimal modification to accommodate additional I-5 freeway HOV lanes.

After comparing and weighing the benefits and impacts of all of the feasible alternatives, the project development team has identified Alternative 3 as the "Locally-Preferred Alternative," subject to public review. Alternative 3 has been identified as the Locally-Preferred Alternative because of its smaller direct impact footprint and associated smaller amount of property acquisition required for ROW, as compared to Alternative 5. Furthermore, Alternative 3 would not require property acquisition and relocations of buildings on the San Juan Elementary School site, which

¹ Full-width standard is defined as a 12' lane.

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would provide a lower project cost associated with property acquisition and avoid temporary inconveniences to the school during the construction period that would result from relocation and reconstruction of the school buildings.

Alternative 5 – Double Cloverleaf Interchange: Alternative 5 provides a double cloverleaf design with dual-lane loop on-ramps located in the northwest and southeast quadrants of the interchange (refer to Figure ES-5). The southbound and northbound off-ramps would be realigned to terminate at the intersections of Del Obispo Street and Los Cerritos Avenue, respectively. Del Obispo Street would be widened and realigned to meet the new southbound off-ramp configuration. Furthermore, Ortega Highway would be widened and/or restriped to accommodate the additional eastbound and westbound through/turn lanes and to allow for lane widening to standard widths.

The current southbound freeway on-ramp would be maintained at its current location for traffic making right turns from eastbound Ortega Highway to the I-5 freeway. Similarly, the current northbound on-ramp would be maintained for traffic making right turns from westbound Ortega Highway to the I-5 freeway; however, the northbound on-ramp would be modified to accommodate construction of the northbound loop on-ramp, as previously discussed under Alternative 3.

To minimize ROW impacts, retaining walls would be placed along the outside of the proposed southbound and northbound off-ramps. A portion of the existing 16-ft soundwall that currently protects portions of the San Juan Elementary School buildings, playground, and baseball fields would remain in place, but a portion of the barrier must be removed and replaced to accommodate the new I-5 southbound ramp configuration. The portion of the existing 16-ft wall to remain in place is located between Stations 532+00 and 538+25. South of Station 538+25, a new 10-ft soundwall is proposed to be constructed along the ramp shoulder to Ortega Highway at Station 518+60. The new 10-ft soundwall along the ramp shoulder would also shield the line of sight from heavy-duty truck exhaust stacks. To be effective, the new soundwall would be designed to connect to, or overlap, the existing soundwall at this location.

If it is determined that conditions have substantially changed during the future final design phase of the project, there is a possibility that the proposed new soundwall could be determined to be infeasible, unreasonable (not cost-effective), or ineffective to achieve the desired level of noise reduction. The final decision regarding the soundwall will be made during the project design phase and after the public involvement process.

It is anticipated that the I-5 freeway may be widened in the future (as a separate project) by providing one additional HOV lane in each direction. Alternative 5 has been designed to accommodate this future widening. Similar to Alternative 3, Alternative 5 would replace the Ortega Highway/I-5 freeway overcrossing to allow for additional lanes and full-width (12-ft) standards, as well as to provide additional span length for the possible future widening of the I-5 freeway. The bridge span and cloverleaf on-ramps were designed such that ramp acceleration lanes could be moved to provide room for additional I-5 lanes while still meeting minimum radii standards for the loop portion of the ramp. The increased bridge span length would result in a deeper bridge section, thus requiring the bridge profile to be raised to maintain the minimum required vertical clearance.

Type of Project (use Table 1 on instruction sheet) Reconfigure existing interchange.					
County Orange	Narrative Location/Route & Postmiles : Interstate 5 at State Route 74 (Ortega Highway) from Post Mile 9.36/9.88 at Post Mile 0.0/0.20				
Caltrans Projects – EA# 0E3100					
Lead Agency: California Department of Transportation District 12					
Contact Person Smita Deshpande	Phone# (949) 724-2245	Fax# (949) 724-2256	Email Smita_Deshpande@dot.ca.gov		
Hot Spot Pollutant of Concern (check one or both)		PM2.5	PM10		
Federal Action for which Project-Level PM Conformity is Needed (check appropriate box)					
Categorical Exclusion (NEPA)	<input checked="" type="checkbox"/>	EA or Draft EIS	<input type="checkbox"/>	FONSI or Final EIS	<input type="checkbox"/>
			<input type="checkbox"/>	PS&E or Construction	<input type="checkbox"/>
					Other
Scheduled Date of Federal Action: May 2008					

Current Programming Dates <i>as appropriate</i>				
	PE/Environmental	ENG	ROW	CON
Start	October 2005	June 2008	December 2008	May 2010
End	June 2008	September 2009	June 2010	May 2012

Project Purpose and Need (Summary): (attach additional sheets as necessary)

Ortega Highway at the I-5 interchange has been identified by the Department and the Orange County Transportation Authority (OCTA) as a "Choke Point" where substantial delay and congestion occur, necessitating improvement to alleviate the problem. The existing I-5 / Ortega Highway interchange currently experiences congestion during the morning and afternoon peak periods, resulting in unacceptable level-of-service (LOS) E and F conditions. Without any improvements, the interchange will experience worse congestion, which would further degrade traffic operations at the interchange. Improvements to the I-5 / Ortega Highway interchange are necessary to alleviate both existing and future traffic congestion and delays within the interchange.

The purpose of the proposed project is:

- To provide congestion relief in order to improve traffic flow on the local and regional transportation system.
- To provide capacity for existing and projected traffic using the interchange.
- To improve traffic safety and operations at the I-5/Ortega Highway interchange.
- To eliminate existing geometric
- To transfer through-vehicle trips to the regional highway system.
- To be consistent with existing and planned local development.
- To help achieve the objectives of the SCAG Regional Transportation Plan and the San Juan Capistrano Strategic Transportation Plan.

Need for the Project

Specific information about the existing deficiencies of the I-5/Ortega Highway interchange and associated need for the project is described below under the following subheadings:

Capacity, Transportation Demand, and Safety

- The proposed project is needed to improve the I-5 / Ortega Highway interchange to alleviate both existing and future traffic congestion and delays within the interchange.
- The current configuration of the interchange does not have the capacity to carry projected traffic volumes. Currently 99,000 vpd travel through the I-5 / Ortega Highway interchange. With the existing and projected future development to the east of the project area, year 2030 traffic at the I-5 / Ortega Highway interchange is projected to reach approximately 121,000 vpd.
- Sections of Ortega Highway within the interchange area currently operate at unacceptable LOS E and F conditions. If the current configuration of the interchange were to remain, traffic congestion would increase and levels of service would further degrade.
- Accidents along Ortega Highway within the project limits occur at a rate three times higher than the state average of similar facilities.
- Without any improvements, the interchange will experience more congestion and further degradation of traffic operations and safety.

Roadway Deficiencies

- The existing lane widths along Ortega Highway in the interchange area are a nonstandard 10-ft and 11-ft. The Caltrans Highway Design Manual (HDM) Index 301.1 requires 12-ft lane widths.

- Shoulders currently do not exist along Ortega Highway in the interchange area. The HDM Index 302.1 requires 8-ft shoulders for a bridge separation.
- The existing I-5 ramp shoulder widths in the interchange area are nonstandard. The HDM Index 302.1 requires 8-ft right shoulders and 4-ft left shoulders.

Modal Interrelationships and System Linkages

- Regional and System Planning: The I-5 / Ortega Highway interchange has regional importance. The proposed project is needed to accommodate the increase traffic volume using the interchange due to the significant land use development in the area.
- State Planning: The year 2005 Route Concept Report (RCR) recommendation for Ortega Highway is a 4-lane conventional highway from I-5 to the proposed Foothill Transportation Corridor (SR-241), with passing lanes provided where feasible from SR-241 eastward to the county line. The RCR recommendations are consistent with the 2002 Orange County Master Plan of Arterial Highways (MPAH), which proposes Ortega Highway as a primary roadway consisting of a 4-lane divided highway. In addition to the above recommendation, the RCR also recommends improvements to increase the capacity of the I-5 / Ortega Highway interchange to accommodate the anticipated growth in south Orange County as well as Riverside County. Therefore, the proposed project is needed to implement the recommendations of the RCR concept for Ortega Highway.
- Regional Planning: According to the April 2000 I-5 RCR, the ultimate (2020 Concept) transportation corridor (UTC) for I-5 is an eight lane freeway with two HOV lanes south of Ortega Highway and a ten lane freeway with two HOV lanes north of Ortega Highway. However, in discussion with Caltrans, the potential future widening of the I-5 freeway would consist of providing one additional high-occupancy vehicle (HOV) lane in each direction. In reference to the Ortega Highway interchange, the RCR lists the addition of auxiliary lanes to I-5 south of the interchange from the southbound on-ramp and northbound off-ramp as part of its 2020 concept. The proposed I-5 / Ortega Highway Project is intended to accommodate these future design considerations for the future I-5 widening.
- Local Planning: The proposed project is needed to implement the objectives of the 2002 San Juan Capistrano Strategic Transportation Plan, which recommends reconstruction of the I-5 / Ortega Highway interchange. The levels of service at both intersections of the I-5 ramps and Ortega Highway are projected to significantly degrade in the future without improvements to the interchange.

Surrounding Land Use/Traffic Generators *(especially effect on diesel traffic)*

The existing I-5 / Ortega Highway interchange is located in an urbanized area of the City, just east of its downtown area, and provides the primary entrance to the City. The area surrounding the interchange is densely populated with commercial, retail, hotel, and community facility uses.

Opening Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility
 Year 2006 (Current year) volumes, percent of heavy trucks, and volume of heavy trucks are presented in Table 1 below. The Percentages are representative of both project alternatives.

Table 1: 2006 Truck Volumes on Roadway Segments (I-5/SR-74 Interchange Area)

Roadway Segment	Current Year (2006) Existing Conditions		
	ADT	%Heavy Trucks	#Heavy Trucks
I-5 Mainline at PM 9.604 (SR-74)	234,000	1.96	4,579
Ortega Highway (West project limit to Del Obispo Street)	14,200	0.7	99
Ortega Highway (Del Obispo Street to I-5 SB Ramps)	40,400	0.7	289
I-5 Southbound Off-Ramp	20,400	7.1	1,454
I-5 Southbound On-Ramp	7,900	4.9	387
I-5 Northbound Off-Ramp	11,300	5.5	624
Ortega Highway (I-5 NB Ramp to East Project Limit)	46,000	6.3	2,887
I-5 Northbound On-Ramp	19,200	4.0	768

RTP Horizon Year / Design Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

Year 2030 (Horizon year) volumes, percent of heavy trucks, and volume of heavy trucks are presented in Table 2 below.

Table 2: Projected 2030 Truck Volumes on Roadway Segments (I-5/SR 74 Interchange Area)

Roadway Segment	Projected Year (2030) No Build and Build Conditions		
	ADT	%Heavy Trucks	#Heavy Trucks
I-5 Mainline at PM 9.604 (SR-74)	283,140	1.96	5,541
Ortega Highway (West project limit to Del Obispo Street)	15,500	0.9	140
Ortega Highway (Del Obispo Street to I-5 SB Ramps)	43,000	0.9	397
I-5 Southbound Off-Ramp	28,200	7.1	2,001
I-5 Southbound On-Ramp	9,400	5.7	532
I-5 Northbound Off-Ramp	14,000	6.1	858
Ortega Highway (I-5 NB Ramp to East Project Limit)	53,000	7.5	3,970
I-5 Northbound On-Ramp	26,300	3.7	977

Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT: Opening Year: 2030

Roadway Segment	Projected Year (2030) No Build and Build Conditions		
	AADT	%Heavy Trucks	#Heavy Trucks
I-5 Mainline at PM 9.604 (SR-74)	283,140	1.96	5,541
Ortega Highway (West project limit to Del Obispo Street)	15,500	0.9	140
Ortega Highway (Del Obispo Street to I-5 SB Ramps)	43,000	0.9	397
I-5 Southbound Off-Ramp	28,200	7.1	2,001
I-5 Southbound On-Ramp	9,400	5.7	532
I-5 Northbound Off-Ramp	14,000	6.1	858
Ortega Highway (I-5 NB Ramp to East Project Limit)	53,000	7.5	3,970
I-5 Northbound On-Ramp	26,300	3.7	977

RTP Horizon Year / Design Year: If facility is an interchange (s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT: Horizon Year: 2030

Roadway Segment	Projected Year (2030) No Build and Build Conditions		
	AADT	%Heavy Trucks	#Heavy Trucks
I-5 Mainline at PM 9.604 (SR-74)	283,140	1.96	5,541
Ortega Highway (West project limit to Del Obispo Street)	15,500	0.9	140
Ortega Highway (Del Obispo Street to I-5 SB Ramps)	43,000	0.9	397
I-5 Southbound Off-Ramp	28,200	7.1	2,001
I-5 Southbound On-Ramp	9,400	5.7	532
I-5 Northbound Off-Ramp	14,000	6.1	858
Ortega Highway (I-5 NB Ramp to East Project Limit)	53,000	7.5	3,970
I-5 Northbound On-Ramp	26,300	3.7	977

Describe potential traffic redistribution effects of congestion relief (impact on other facilities)

Some traffic delays can be expected during construction of the project. However, the traffic impacts during construction are only temporary in nature and will cease upon completion of construction activities.

During the operation phase, the proposed project would result in the modification of the existing I-5/ Ortega Highway (SR 74) Interchange. These modifications would not redistribute traffic but would relieve traffic backup at the project interchange thus improving traffic LOS in the area.

Comments/Explanation/Details *(attach additional sheets as necessary)*

Conformity determinations require the analysis of direct and indirect emissions associated with the proposed project in comparison to the no project condition. If the total of direct and indirect emissions from the project reaches or exceeds regionally significant thresholds, the Lead Agency must perform a conformity determination to demonstrate the positive conformity of the federal action.

The proposed project is identified in the "Orange County State Highway" project listing of the federally approved 2006 RTIP as "ORA120326". The 2006 RTIP was approved on October 2, 2006, and it was found to conform to all of the requirements. The project is listed in the 2006 RTIP under the conformity category "nonexempt," meaning that it is nonexempt from conformity requirements. The proposed project has been modeled, and it has been included in the 2006 RTIP with **Model Number O341** and Project Description:

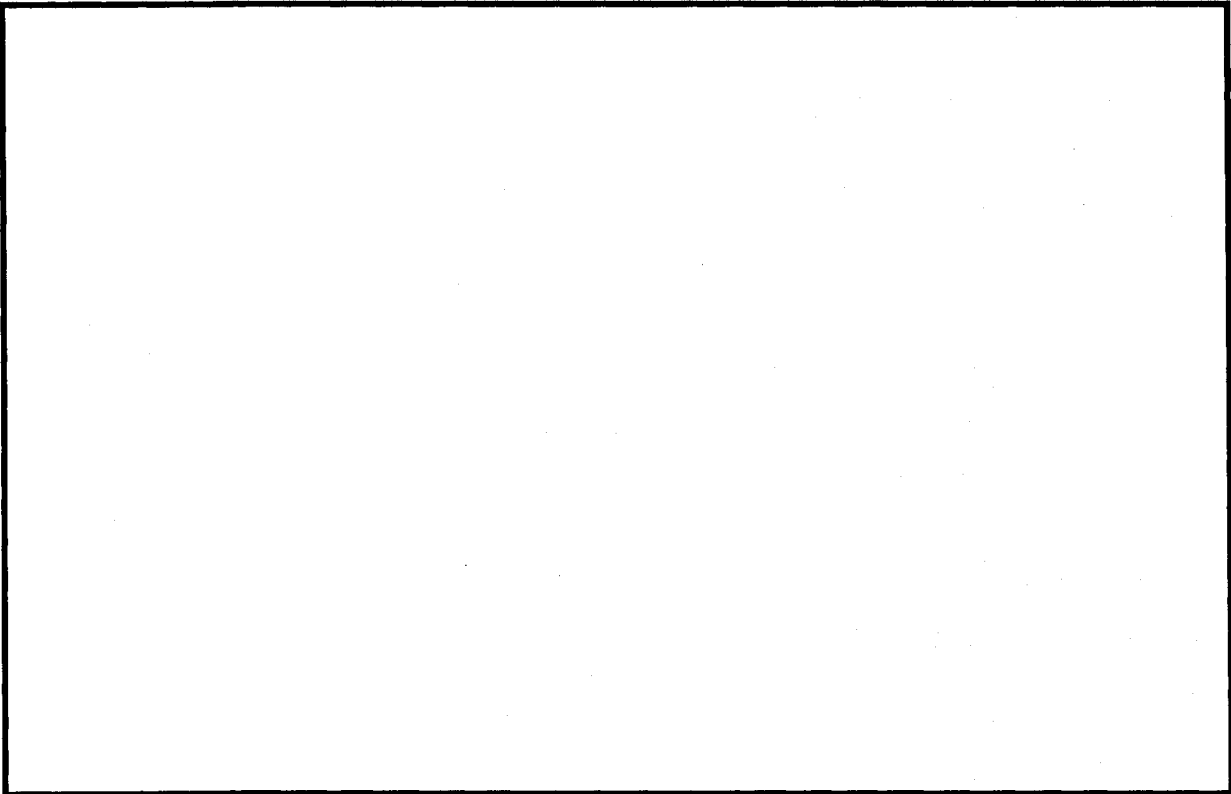
"OCTA-AT I-5 AND SR-74/ORTEGA HWY-REBUILD INTERCHANGE INCLUDING WIDENING OF SR-74 OVERCROSSING."

Given that the proposed project is consistent with the 2004 RTP and included in the adopted 2006 RTIP, it would not interfere with the timely implementation of all Transportation Control Measures (TCMs) identified in the currently approved SIP.

Since the project is included within SCAG'S RTP as a State Highway Project the current Code of Federal Regulations (40 CFR 93.126) stipulates that a conformity determination with State or Federal Implementation Plans (SIP or FIP) must be made for a project that involves federal funding. The project is included in the RTIP, and conformity and associated analysis is part of the Federal Transportation Improvement Program (FTIP) approval process.

The I-5/Ortega Highway Interchange has been identified by the Department and the Orange County Transportation Authority (OCTA) as a "Choke Point" where substantial delay and congestion occur, necessitating improvement to alleviate the problem. The existing I-5 / Ortega Highway interchange currently experiences congestion during the morning and afternoon peak periods, resulting in unacceptable level-of-service (LOS) E and F conditions. Without any improvements, the interchange will experience worse congestion, which would further degrade traffic operations at the interchange. Improvements to the I-5 / Ortega Highway interchange are necessary to alleviate both existing and future traffic congestion and delays within the interchange.

Based up on the information provided above, the project is not expected to introduce significant amounts of diesel truck traffic and would not generate additional diesel truck traffic above levels anticipated without implementation of the project. Therefore, the project is not considered a project of significant concern per the definition contained within 40 CFR 93.1.126(b)(1).



PM Conformity Hot Spot Analysis – Project Summary for Interagency Consultation

RTIP ID# (required) RIV050534				
TCWG Consideration Date (date to be presented at the TCWG) September 25, 2007				
Project Description (clearly describe project) The proposed project improves the existing I-215/Newport Road interchange utilizing a modified partial cloverleaf interchange configuration. Newport Road would be widened from four to six through lanes, and two approach ramp entrance lanes. All ramps would be reconstructed to connect with the widened cross section of Newport Road. In between the northbound and southbound ramp terminals, Newport Road would generally be widened to accommodate a 6-foot sidewalk on the north side, a 5-foot shoulder, a 2-foot left shoulder, four 12-foot through/turn lanes in each direction, and a 14-foot median. The Newport Road overcrossing would be widened as part of the project. East and west of the interchange, Newport Road would consist of three through lanes in each direction plus any necessary turn lanes. Finally, the I-215 bridge over Salt Creek at the northern extents of the project area would be widened to accommodate the proposed northbound on-ramp.				
Type of Project (use Table 1 on instruction sheet) Reconfigure existing interchange				
County Riverside	Narrative Location/Route & Postmiles I-215/Newport Road Interchange Riv-215-PM 17.7/19.3 Caltrans Projects – EA# 0J4400			
Lead Agency:				
Contact Person	Phone#	Fax#	Email	
Scott Staley	951.955.2092	951.955.3164	cstaley@rctlma.org	
Hot Spot Pollutant of Concern (check one or both) <input checked="" type="checkbox"/> PM2.5 <input checked="" type="checkbox"/> PM10				
Federal Action for which Project-Level PM Conformity is Needed (check appropriate box)				
<input checked="" type="checkbox"/> Categorical Exclusion (NEPA)	EA or Draft EIS	FONSI or Final EIS	PS&E or Construction	Other
Scheduled Date of Federal Action:				
NEPA Delegation – Project Type (check appropriate box)				
Excluded	Section 6004 – NEPA Categorical Exclusions (CEs)		<input checked="" type="checkbox"/> Section 6005 – All NEPA document types (i.e. CE, EAs, EIS)	
Current Programming Dates (as appropriate)				
	PE/Environmental	ENG	ROW	CON
Start	05/07	10/08	12/08	5/10
End	09/08	12/09	12/09	11/11

PM Conformity Hot Spot Analysis – Project Summary for Interagency Consultation

Project Purpose and Need (Summary): *(attach additional sheets as necessary)*

In recent years, there has been an increasing amount of vehicular traffic as the population and economic vitality increases throughout Riverside County, particularly in the vicinity of the proposed project. This growth has resulted in an increase in the level of congestion located at the I-215/Newport Road interchange area. To alleviate congestion and improve traffic operations in the interchange area, the County, Caltrans, and FHWA are proposing to widen the existing Newport Road overcrossing and reconstruct the interchange exit and entrance ramps. The primary purpose of the proposed project is to improve traffic operations in the interchange area.

Surrounding Land Use/Traffic Generators *(especially effect on diesel traffic)*

Land use in the project vicinity consists of a mix of commercial/retail, residential, vacant/undeveloped properties. A description of land use in the vicinity of the respective quadrants of the I-215/Newport Road interchange follows:

Northeast quadrant = vacant/undeveloped; residential (single-family)

Southeast quadrant = commercial/retail; residential (multi-family)

Southwest quadrant = commercial/retail (under construction)

Northwest quadrant = commercial/retail; vacant/undeveloped

Opening Year (2011): Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

LOS C-D for Build and No Build, 169,655 (AADT), 3.6% (% Diesel Trucks), 12,215 (Diesel Truck AADT), 6,160 (Total Truck AADT)

RTP Horizon Year / Design Year (2035): Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

LOS C-F for Build and No Build, 292,200 (AADT), 3.6% (% Diesel Trucks), 10,610 (Diesel Truck AADT), 21,038 (Total Truck AADT)

PM Conformity Hot Spot Analysis – Project Summary for Interagency Consultation

Opening Year (2011): If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

32,430 (AADT), 3.6% (% Diesel Trucks), 1,178 (Diesel Truck AADT), 2,335 (Total Truck AADT)

RTP Horizon Year / Design Year (2035): If facility is an interchange (s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

61,900 (AADT), 3.6% (% Diesel Trucks), 2,248 (Diesel Truck AADT), 4,457 (Total Truck AADT)

Describe potential traffic redistribution effects of congestion relief (*impact on other facilities*)

The proposed project would provide congestion relief and improve operations at the interchange area by smoothing traffic flow and vehicle speeds. Additional turn pockets/lanes are provided on Newport Road and the interchange ramps, and ramp metering would be added to the entrance ramps. The proposed improvements to the existing interchange are not expected to create or worsen PM₁₀ or PM_{2.5} emissions.

Comments/Explanation/Details (attach additional sheets as necessary) See attached truck AADT data sheet.

RTE	DIST	CNTY	POST MILE	L E G DESCRIPTION	VEHICLE AADT TOTAL	TRUCK AADT % TOT	TRUCK AADT TOTAL				% TRUCK AADT				EAL	YEAR VER/ (1000) EST
							By Axle	By Axle	By Axle	By Axle	By Axle	By Axle	By Axle	By Axle		
							2	3	4	5+	2	3	4	5+		
215	08	RIV	R8.998	A JCT. RTE. 15 (beg non add)	79000	5688	7.2	2824	753	311	1800	49.65	13.24	5.47	31.65	835 05V
215	08	RIV	23.537	B SOUTH JCT. RTE. 74	69000	5003	7.25	2401	650	350	1601	48	13	7	32	748 05E
215	08	RIV	23.537	A SOUTH JCT. RTE. 74	86000	10148	11.8	5196	1492	589	2872	51.2	14.7	5.8	28.3	1397 84E
215	08	RIV	26.308	A PERRIS, NORTH JCT. RTE. 74	79000	10428	13.2	4859	1220	605	3744	46.6	11.7	5.8	35.9	1663 84E
215	08	RIV	27.23	A PERRIS, D STREET	94000	11280	12	4286	1241	451	5302	38	11	4	47	2160 86V
215	08	RIV	R35.76	B CACTUS AVENUE	117000	11934	10.2	4762	1205	597	5370	39.9	10.1	5	45	2218 84E
215	08	RIV	R35.76	A CACTUS AVENUE	117000	10530	9	4296	1042	527	4665	40.8	9.9	5	44.3	1933 84E
215	08	RIV	R38.339	B JCT. RTE. 60 EAST	118000	17110	14.5	7443	1078	445	8144	43.5	6.3	2.6	47.6	3235 96V
215	08	RIV	R38.339	A JCT. RTE. 60 EAST	170000	18530	10.9	7783	1001	334	9413	42	5.4	1.8	50.8	3661 96V
215	08	RIV	42.837	B RIVERSIDE, SPRUCE STREET	162000	11826	7.3	4636	792	438	5960	39.2	6.7	3.7	50.4	2356 84E
215	08	RIV	43.27	B RIVERSIDE, JCT. RTE. 60/91, RIVERSIDE/ ESCONDIDO FREEWAY	162000	10530	6.5	4170	674	379	5307	39.6	6.4	3.6	50.4	2095 84E
215	08	RIV	43.27	A RIVERSIDE, JCT. RTE. 60/91, RIVERSIDE/ ESCONDIDO FREEWAY	145000	8845	6.1	3697	655	389	4104	41.8	7.4	4.4	46.4	1663 84E
215	08	RIV	45.013	A CENTER STREET	140000	9660	6.9	4038	715	425	4482	41.8	7.4	4.4	46.4	1816 84E
215	08	SBD	.402	A IOWA AVENUE	146000	10366	7.1	4457	788	404	4717	43	7.6	3.9	45.5	1915 84E
215	08	SBD	4.052	B COLTON, JCT. RTE. 10	160000	11520	7.2	4954	876	449	5242	43	7.6	3.9	45.5	2128 84E
215	08	SBD	4.052	A COLTON, JCT. RTE. 10	183000	17568	9.6	8257	2337	650	6324	47	13.3	3.7	36	2781 84V
215	08	SBD	6.06	A SAN BERNARDINO, MILL STREET	167000	10354	6.2	4463	1450	393	4048	43.1	14	3.8	39.1	1744 84E
215	08	SBD	7.183	B SAN BERNARDINO, JCT. RTE. 66 WEST	152000	10488	6.9	4520	1468	399	4101	43.1	14	3.8	39.1	1767 84E
215	08	SBD	7.183	A SAN BERNARDINO, JCT. RTE. 66 WEST	151000	10117	6.7	4371	1406	395	3946	43.2	13.9	3.9	39	1702 84E
215	08	SBD	8.603	B SAN BERNARDINO, JCT. RTE. 259 NORTH	136000	10064	7.4	4348	1399	392	3925	43.2	13.9	3.9	39	1693 84E

PM Conformity Hot Spot Analysis – Project Summary for Interagency Consultation

RTIP ID# <i>(required)</i> RIV031209				
Project Description <i>(clearly describe project)</i> <p>The Portola Avenue and I-10 Interchange Project is located in the northern portion of the City of Palm Desert, Riverside County, California. The construction of the proposed interchange on Interstate 10 (I-10) at Portola Avenue will serve the Cities of Palm Desert, La Quinta, Indian Wells, Rancho Mirage, and unincorporated portions of Riverside County north of I-10. The Portola Avenue Interchange would be located within the jurisdiction of the City of Palm Desert, west of the existing Cook Street Interchange and east of the existing Monterey Avenue Interchange. The project would entail the realignment of the adjacent Varner Road within the project vicinity and the construction of an overpass extending Portola Avenue over I-10. The proposed interchange would be located approximately 1.6 kilometers north of the existing Cook Street Interchange and approximately 2.1 kilometers south of the existing Monterey Avenue Interchange. The project would construct new 6 lane (3 each direction) Portola Avenue Interchange and ramps from Dinah Shore Drive to Varner Road, including bridge over Union Pacific Rail Road (UPRR) and realign/widen Varner Road from 2 to 4 lanes.</p> <p>I-10 is an east-west freeway that provides regional access for the Cities of Palm Desert, Indio, La Quinta, Indian Wells, Rancho Mirage, and adjacent unincorporated portions of Riverside County. I-10 is currently a six- to eight-lane freeway and connects the region with the Los Angeles region to the west and with Arizona to the east. State Highway 111 junctures with the I-10 just west of Palm Springs and provides access to Brawley in Imperial Valley. Additionally, State Highway 174 is another important regional route that extends south and west from Highway 111 to the mountain communities in Santa Rosa, San Jacinto Mountains, and western Riverside County.</p>				
Type of Project <i>(use Table 1 on instruction sheet)</i> New Interchange				
County	Narrative Location/Route & Postmiles Post Mile 44.5/45.9			
Riverside	Caltrans Projects – EA# 0F120			
Lead Agency: Caltrans				
Contact Person		Phone#	Fax#	Email
Emad Makar		(909) 383-4561		Emad.Makar@dot.ca.gov
Hot Spot Pollutant of Concern <i>(check one or both)</i> PM2.5 X PM10 X				
Federal Action for which Project-Level PM Conformity is Needed <i>(check appropriate box)</i>				
X	Categorical Exclusion (NEPA)	EA or Draft EIS	FONSI or Final EIS	PS&E or Construction
Other				
Scheduled Date of Federal Action:				
Current Programming Dates <i>as appropriate</i>				
	PE/Environmental	ENG	ROW	CON
Start				
End				
Project Purpose and Need (Summary): <i>(attach additional sheets as necessary)</i> <p>The purpose of the Portola Avenue Interchange project is to provide additional access to I-10 for the area between Cook Street and Monterey Avenue and to support the populations of the fast-growing areas of Palm Desert and Coachella Valley. Palm Desert and the Coachella Valley have continued to be one of the fastest growing regions in California. Portola Avenue is one of the main arteries of north-south traffic flow between Cook Street and Monterey Avenue. The Cities of Palm Desert and Indian Wells are dependent on Portola Avenue as an important traffic circulation element. The adjacent interchanges at Cook Street and Monterey Avenue currently have high Average Daily Traffic (ADT) volumes that are projected to increase due to the growth in the area. As stated in the Project Study Report (April 2005), ADT on the Monterey Avenue Interchange is expected to increase from 28,200 to 65,800 in 26 years (2004 to 2030), and ADT on Cook Street Interchange is expected to increase from 20,300 to 45,200 in 26 years (2004 to 2030). Without improvement to the area, these two interchanges will experience more congestion and delays. The Monterey Avenue Interchange will be impacted more significantly by these delays since it is the primary access point for the Cities of Palm Desert and Rancho Mirage. Construction of the Portola Avenue Interchange is intended to reduce the impacts associated with the anticipated increase in congestion along Cook Street and Monterey Avenue, as well as on the Cook Street and Monterey Avenue Interchanges on I-10.</p>				

Surrounding Land Use/Traffic Generators *(especially effect on diesel traffic)*

The land uses surrounding the Portola Avenue/I-10 Project consist of Community Commercial, Industrial Business Park, Medium and High Density residential, and Open Space.

Opening Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

Portola Avenue @ Interchange

2015 Build Condition

AADT: 13,940*

Trucks: 7.7%

Truck AADT: 1,073

(Note: "No build" conditions will produce '0' trips north of Dinah Shore Drive.)

* AADT volumes not provided in Traffic Study. Volumes were estimated using PM Peak Hour volumes

RTP Horizon Year / Design Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

Portola Avenue @ Interchange

2030 Build Condition

AADT: 25,160*

Trucks: 7.7%

Truck AADT: 1,940

(Note: "No build" conditions will produce '0' trips north of Dinah Shore Drive.)

* AADT volumes not provided in Traffic Study. Volumes were estimated using PM Peak Hour volumes

Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

Portola @ EB On-Ramp / 2015 Build Condition / 3,570 (AADT) / 7.7% (truck percentage) / 275 (truck AADT)

Portola @ EB Off Ramp / 2015 Build Condition / 3,000 (AADT) / 7.7% (truck percentage) / 230 (truck AADT)

Portola @ WB Off Ramp / 2015 Build Condition / 6,880 (AADT) / 7.7% (truck percentage) / 530 (truck AADT)

Portola @ WB On Ramps / 2015 Build Condition / 2,990 (AADT) / 7.7% (truck percentage) / 230 (truck AADT)

RTP Horizon Year / Design Year: If facility is an interchange (s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

Portola @ EB On-Ramp / 2030 Build Condition / 6,460 (AADT) / 7.7% (truck percentage) / 497 (truck AADT)

Portola @ EB Off Ramp / 2030 Build Condition / 5,410 (AADT) / 7.7% (truck percentage) / 420 (truck AADT)

Portola @ WB Off Ramp / 2030 Build Condition / 12,430 (AADT) / 7.7% (truck percentage) / 957 (truck AADT)

Portola @ WB On Ramps / 2030 Build Condition / 5,400 (AADT) / 7.7% (truck percentage) / 415 (truck AADT)

Describe potential traffic redistribution effects of congestion relief *(impact on other facilities)*

The traffic conditions at the Monterey Avenue and Cook Street Interchanges is anticipated to be congested in the future and it is anticipated that the level of service (LOS) in the future year will be unacceptable. The proposed interchange will reduce congestion at the Monterey Avenue and Cook Street Interchanges.

Comments/Explanation/Details *(attach additional sheets as necessary)*

Particulate Matter (PM₁₀ and PM_{2.5}) Analysis

The traffic study completed for the project shows that the estimated Average Daily Traffic (ADT) along Portola Avenue in the year 2035 will be 28,700. The EPA "Transportation Conformity Guidance for Qualitative Hot-Spot Analyses in PM_{2.5} and PM₁₀ Nonattainment and Maintenance Areas" states that a project of air quality concern is a project on a new highway or expressway with greater than 125,000 annual average daily traffic (AADT) and 8% or more of such AADT is diesel truck traffic. The proposed interchange project will provide additional access to I-10 and decrease the volume to capacity ratios along Monterey Avenue and Cook Street, which will improve the traffic flow and vehicle speeds, and will not involve an increase in idling.

Based on the information provided above, future new or worsened PM₁₀ violations of any standards are not anticipated, and therefore, the project meets the conformity hot-spot requirements in 40 CFR 93.116 and 93.123 for PM₁₀.

RTIP ID# RIV011241

Project Description:

The City of Corona, in coordination with the California Department of Transportation (Department), is proposing to grade separate the existing Auto Center Drive/Burlington Northern Santa Fe (BNSF) at-grade railroad crossing in the City of Corona, Riverside County, California (see Figure 1).

Through the project area the existing Auto Center Drive consists of a northwest/southeast four-lane roadway that crosses the existing BNSF railroad tracks at-grade. To the north of the railroad crossing Auto Center Drive flows into Railroad Street, which is also a four-lane roadway, which travels east/west. From a point just north of the railroad tracks along Auto Center Drive to a point approximately 300 feet east along Railroad Center Drive from the intersection of Auto Center Drive/Railroad Street the southeast bound travel lanes on Auto Center Drive and the westbound travel lanes along Railroad Street narrow down to one lane before transitioning back to two lanes. Through this area the roadway along Railroad Street is wide enough to accommodate four lanes and was originally constructed as a four-lane facility, however, the roadway from approximately 300 feet east of the intersection of Auto Center Drive/Railroad Street to just north of the BNSF tracks is only wide enough to accommodate three lanes. Due to concerns regarding the sharp radius of the curve between Auto Center Drive and Railroad Street the roadway was restriped along Railroad Street for three wider lanes to improve the maneuverability at the Auto Center Drive/Railroad Street intersection.

In summary, the roadway configuration along Auto Center Drive and onto Railroad Street from south to north is as follows:

- Research Drive to just north of BNSF railroad tracks – four lanes
- Just north of BNSF railroad tracks along Auto Center Drive to a point approximately 300 feet east of the intersection of Auto Center Drive/Railroad Street along Railroad Street – three lanes (see footnote 1 below for explanation regarding this lane configuration)
- From approximately 300 feet east of the intersection of Auto Center Drive/Railroad Street to the east along Railroad Street – four lanes

Auto Center Drive continues to the north of Railroad Street as a two-lane paved roadway for a short distance before transitioning to a two-lane dirt road, which is used primarily for accessing Prado Dam. A stop sign is located along Auto Center Drive for traffic traveling south along Auto Center Drive to the north of Railroad Street to control traffic entering onto Auto Center Drive/Railroad Street.

The proposed project would construct a uniform four-lane roadway, including an overcrossing over the existing BNSF tracks, from the intersection of Auto Center Drive and Research Drive to a point approximately 750 feet east of the intersection of Auto Center Drive and Railroad Street (see Figures 2 and 3). The roadway would consist of two 12-foot wide lanes in each direction, a striped median, and 5-foot wide sidewalks and an 8-foot shoulder/Class II bikeway along both sides of the roadway. A southbound left turn pocket would be constructed to provide access to the Metrolink parking lot. An access road would be constructed within the Metrolink parking during construction lot to maintain connectivity with Auto Center Drive. The Metrolink parking lot will be restriped following construction to ensure that the number of parking spaces within the lot is maintained. To minimize impacts to the Metrolink facility and existing businesses a retaining wall would be constructed along both sides of the overcrossing to the south of the BNSF tracks. In addition, the driveways along Railroad Street would be reconstructed to match the new roadway.

Following construction, Auto Center Drive would flow directly into Railroad Street. To provide access onto Auto Center Drive to the north, a new stop controlled intersection would be constructed. To the north of the intersection Auto Center Drive would be reconstructed for a distance of approximately 750 feet to connect the new overcrossing with the existing roadway. The borrow site for the proposed project will be selected by the contractor. Any environmental clearances related to the borrow site will be obtained by the contractor prior to construction.

The purpose of the proposed project is to provide better access to the City of Corona and to reduce the congestion and inconvenience caused by this existing at-grade facility. The proposed project is also anticipated to improve safety, as it will remove the existing at-grade conflict between vehicular traffic and rail traffic. Currently, 76 trains cross Auto Center Drive at this location on weekdays (54 freight, 20 Metrolink, and 2 Amtrak trains). In addition, the City of Corona General Plan identifies the need to grade separate at-grade railroad crossings along the identified truck route system within the City, which includes Auto Center Drive. The proposed project would be consistent in meeting this identified need.

Type of Project (use Table 1 on instruction sheet)

Roadway realignment, with railroad crossing grade separation

PM Conformity Hot Spot Analysis – Project Summary for Interagency Consultation

County	Narrative Location/Route & Postmiles:			
Riverside	Project is located at the Auto Center Drive/Burlington Northern Santa Fe railroad crossing, in the City of Corona in Riverside County (see Figure 1).			
Lead Agency: City of Corona				
Contact Person	Phone#	Fax#	Email	
Keith Cooper	(213) 627-5376	(213) 627-6853	kcooper@jsanet.com	
Hot Spot Pollutant of Concern (check one or both) PM2.5 <input checked="" type="checkbox"/> PM10 <input checked="" type="checkbox"/>				
Federal Action for which Project-Level PM Conformity is Needed (check appropriate box)				
<input checked="" type="checkbox"/> Categorical Exclusion (NEPA)	EA or Draft EIS	FONSI or Final EIS	PS&E or Construction	Other
Scheduled Date of Federal Action:				
Current Programming Dates as appropriate				
	PE/Environmental	ENG	ROW	CON
Start	January 2007	January 2007	January 2008	December 2008
End	December 2007	January 2008	June 2008	July 2010
Project Purpose and Need (Summary): (attach additional sheets as necessary)				
<p>The purpose of the proposed project is to provide better access to the City of Corona and to reduce the congestion and inconvenience caused by this existing at-grade facility. The proposed project is also anticipated to improve safety, as it will remove the existing at-grade conflict between vehicular traffic and rail traffic. Currently, 76 trains cross Auto Center Drive at this location on weekdays (54 freight, 20 Metrolink, and 2 Amtrak trains). In addition, the City of Corona General Plan identifies the need to grade separate at-grade railroad crossings along the identified truck route system within the City, which includes Auto Center Drive. The proposed project would be consistent in meeting this identified need.</p>				
Surrounding Land Use/Traffic Generators (especially effect on diesel traffic):				
<p>Immediately surrounding land uses consist primarily of general industrial and light industrial uses and warehousing facilities. General commercial land uses are found approximately ¼-mile south of the crossing. Through the project area the existing Auto Center Drive consists of a northwest/southeast four-lane roadway that crosses the existing BNSF railroad tracks at-grade. To the north of the railroad crossing Auto Center Drive flows into Railroad Street, which is also a four-lane roadway, which travels east/west. From a point just north of the railroad tracks along Auto Center Drive to a point approximately 300 feet east along Railroad Center Drive from the intersection of Auto Center Drive/Railroad Street the southeast bound travel lanes on Auto Center Drive and the westbound travel lanes along Railroad Street narrow down to one lane before transitioning back to two lanes. The roadway was originally constructed as a four lane facility through this segment, however, due to concerns regarding the sharp radius of the curve between Auto Center Drive and Railroad Street the roadway was restriped along Railroad Street for three wider lanes to improve the maneuverability at the Auto Center Drive/Railroad Street intersection.</p>				

Opening Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility**Table 1**

OPENING YEAR 2012 Traffic Data: Auto Center Drive Project Limits ^a							
Project Alternative	AADT	Truck Only AADT	Truck % ^b	AM Peak Hour Traffic		PM Peak Hour Traffic	
				Volumes	LOS ^c	Volumes	LOS ^c
Build Alternative	13,200	660	5	1,098	A	1,343	A
No-build Alternative	13,200	650	5	1,098	A	1,343	A

^a Traffic volumes taken from Auto Center Drive/BNSF Railroad Grade Separation Traffic Forecast Volumes Letter Report, provided as Appendix A. Urban Crossroads, May 2007.

^b Truck percentage calculated from averaged AM and PM peak hour traffic volumes broken down by vehicle class. Traffic Impact Analysis, Urban Crossroads 2007.

^c LOS calculation based on four lane facility, with capacity of 1,400 vehicles per hour per lane.

RTP Horizon Year / Design Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility**Table 2**

DESIGN YEAR 2032 Traffic Data: Auto Center Drive Project Limits ^a							
Project Alternative	AADT	Truck Only AADT	Truck % ^b	AM Peak Hour Traffic		PM Peak Hour Traffic	
				Volumes	LOS ^c	Volumes	LOS ^c
Build Alternative	17,600	880	5	1,851	A	1,934	A
No-build Alternative	17,600	880	5	1,851	A	1,934	A

^a Traffic volumes taken from Auto Center Drive/BNSF Railroad Grade Separation Traffic Forecast Volumes Letter Report, provided as Appendix A. Urban Crossroads, May 2007.

^b Truck percentage calculated from averaged AM and PM peak hour traffic volumes broken down by vehicle class. Traffic Impact Analysis, Urban Crossroads 2007.

^c LOS calculation based on four lane facility, with capacity of 1,400 vehicles per hour lane.

Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

Facility is not an interchange or intersection. Facility is a grade separation project that will alleviate the congestion and inconvenience caused by an existing at-grade railroad crossing.

RTP Horizon Year / Design Year: If facility is an interchange (s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

Facility is not an interchange or intersection. Facility is a grade separation project that will alleviate the congestion and inconvenience caused by an existing at-grade railroad crossing.

Describe potential traffic redistribution effects of congestion relief (impact on other facilities)

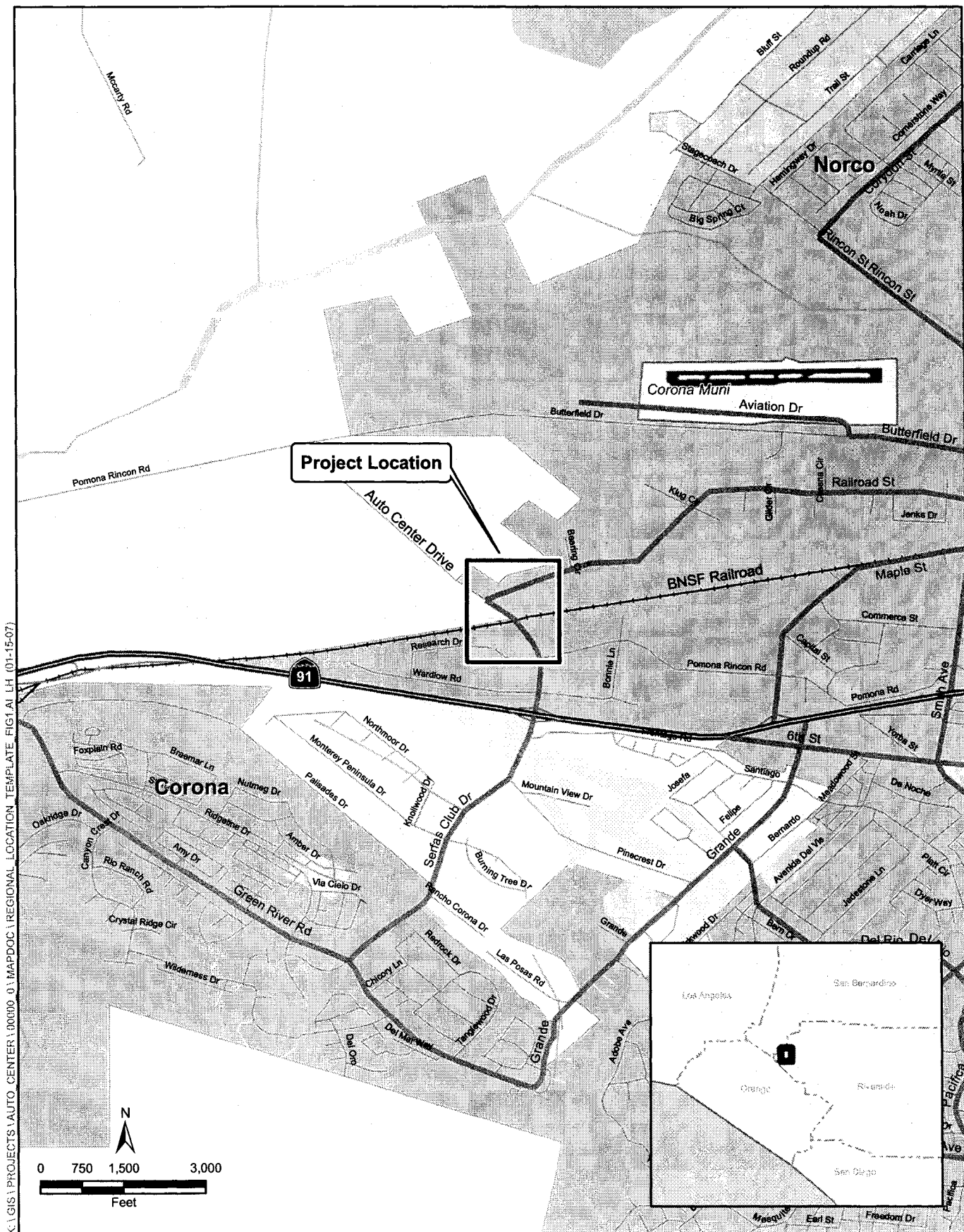
Anticipated traffic redistribution effects are negligible. However, adjacent intersection locations and related roadway segments should experience congestion relief as a result of this proposed grade separation project. Vehicle queues that currently form along Auto Center Drive, during train crossings, that periodically cause congestion at adjacent intersection locations and related roadway segments, would no longer occur.

Comments/Explanation/Details (attach additional sheets as necessary)

The EPA's March 2006 guidance document Transportation Guidance for Qualitative Hot-spot Analysis in PM2.5 and PM10 Nonattainment and Maintenance Areas references a two-step criteria to identify "a significant volume of diesel truck traffic." The first criterion is facilities with greater than 125,000 AADT volumes. If the first criterion is met, the second criterion is that 8% or more of said traffic volumes (i.e., 10,000 vehicles or more) are diesel truck traffic volumes. With respect to surface street traffic volumes along project limits of Auto Center Drive, and along the other nearby roadway segments, opening year (2012) AADT volumes are forecast to be far below the above-mentioned screening-level threshold criteria of 125,000 and 10,000 for total AADT traffic volumes and diesel truck traffic volumes, respectively. As such, the project would not result in a significant number of, or significant increase in, diesel vehicles on project area surface streets.

According to the Transportation Conformity Guidance for Qualitative Hot-spot Analyses in PM2.5 and PM10 Nonattainment and Maintenance Areas (page 25), this project is not a project of air quality concern under 40 CFR 93.123(b)(1)(i) and (ii):

The project site is not in or affecting an area or location identified in any PM10 or PM2.5 implementation plan. The immediate project area is not considered to be a site of violation or possible violation.



SOURCE: ESRI Streetmap USA (2005)

Figure 1
Project Vicinity and Location
Auto Center Drive/Burlington Northern Santa Fe (BNSF)
Grade Separation Project

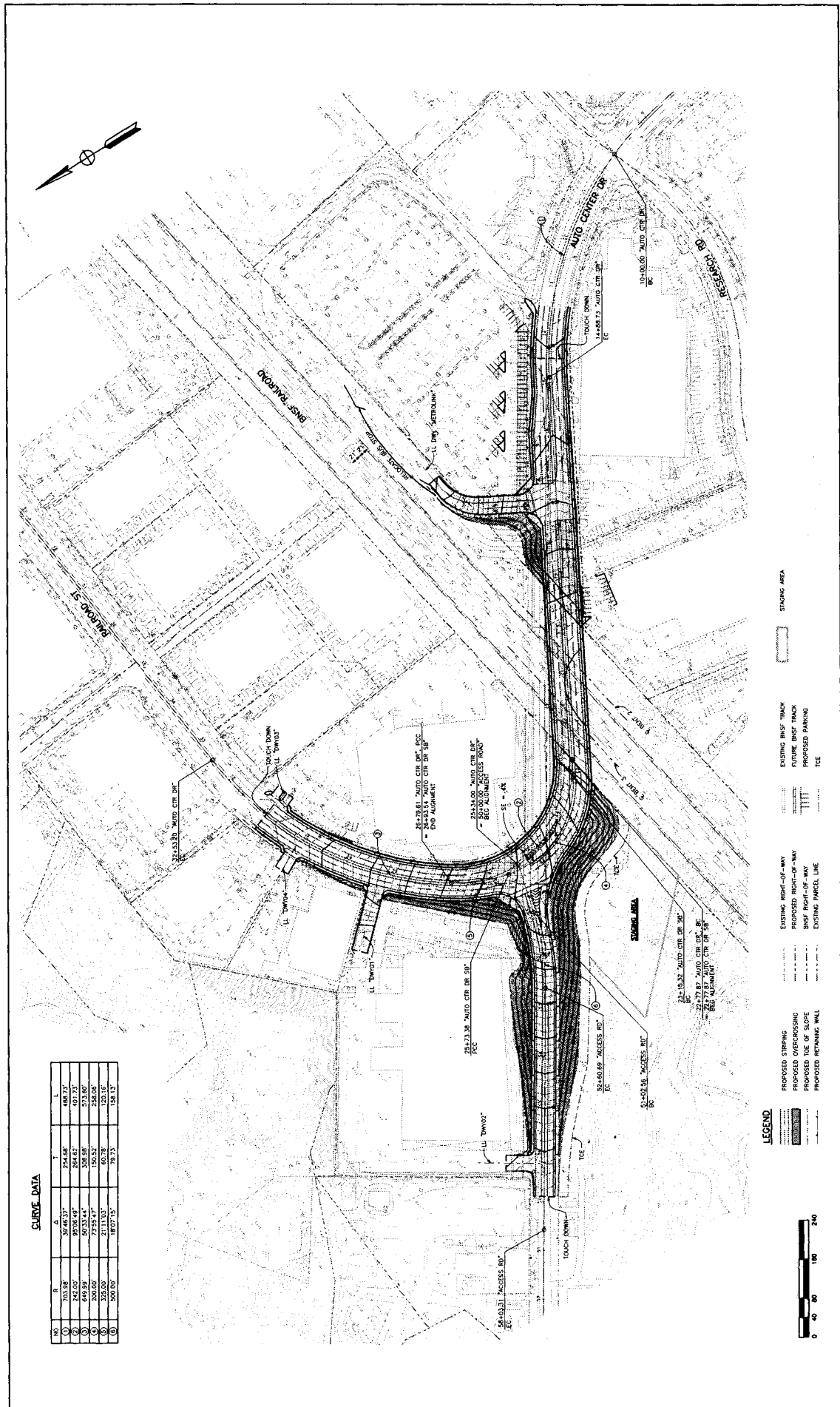


Figure 2
Proposed Project
Auto Center Drive/Burlington Northern Santa Fe (BNSF)
Grade Separation Project

SOURCE: LAN Engineering (2007)

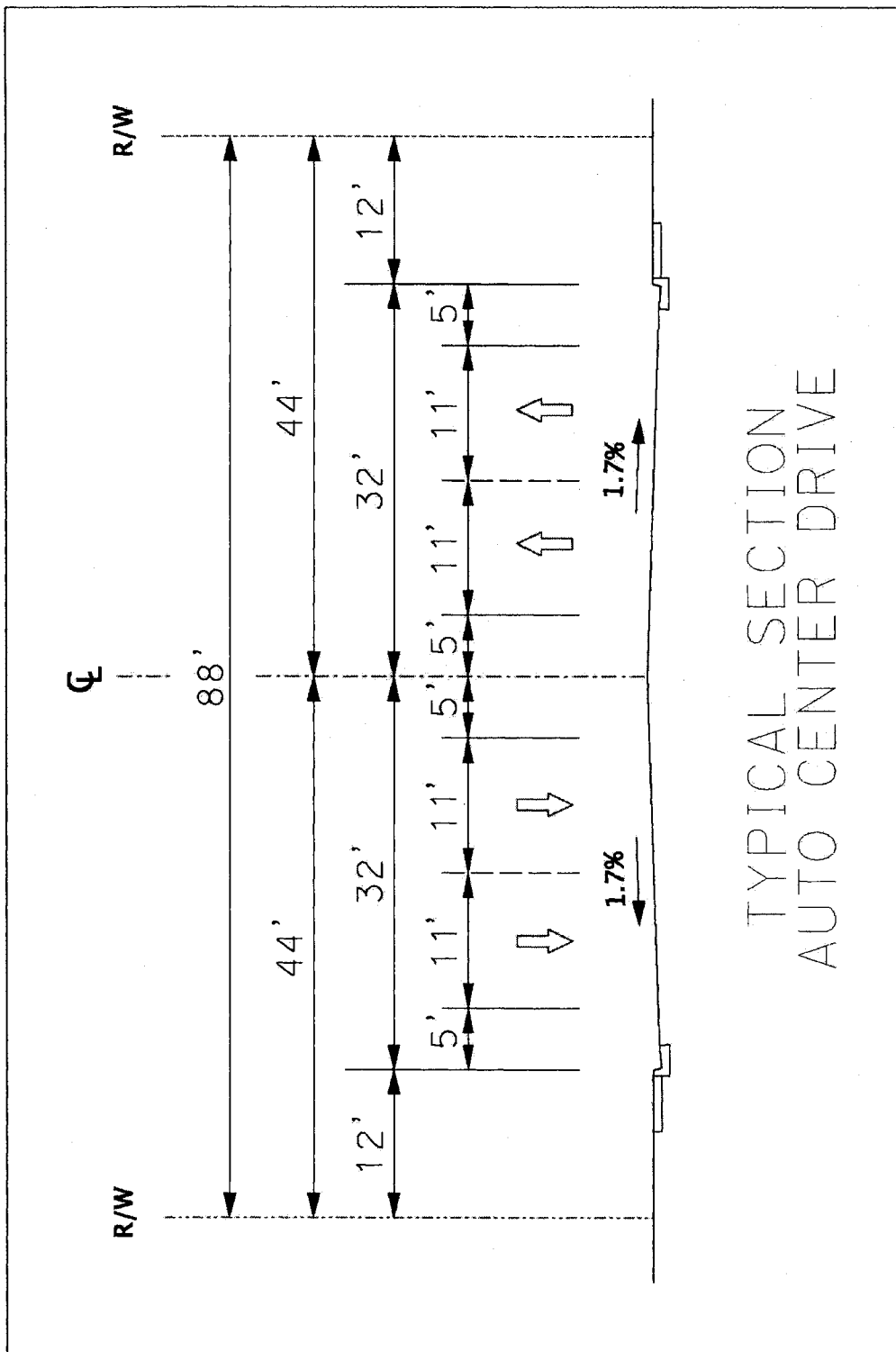
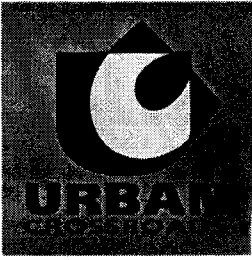


Figure 3
Proposed Typical Section
Northern Santa Fe (BNSF)
Auto Center Drive/Burlington Northern Santa Fe (BNSF)
Grade Separation Project

Appendix A



July 25, 2007

Mr. James Faber
LIM & NASCIMENTO ENGINEERING CORP.
12 Mauchly, Building L
Irvine, CA 92618

**Subject: Response to Comments Regarding the Auto Center Drive/BNSF
Railroad Grade Separation Traffic Forecast Volumes Letter Report**

Dear Mr. Faber:

The firm of Urban Crossroads, Inc. has reviewed the comments provided by the City of Corona (Linda Abushaban, Senior Engineer) regarding the Auto Center Drive/BNSF Railroad Grade Separation Traffic Forecast Volumes letter report (dated May 3, 2007). The comments, received via air mail from Lim & Nascimento (LAN) Engineering Corp., were provided as notations on the volume forecasts letter / exhibits. The comments are included in Attachment "A". This letter addresses each of the City's comments.

Item 1

Exhibit A: Existing Average Daily Traffic (ADT) – (regarding the existing ADT volume along the State Route (SR-) 91 Westbound Off-Ramp at Auto Center Drive) A bit low? Compared to Caltrans ADT 2004 (6,400 VPD). What changed from 2004 to 2007 that less people exit?

Response to Item 1

The existing ADT volume along the SR-91 Westbound Off-Ramp at Auto Center Drive was calculated to be approximately 3,400 VPD. This daily volume was developed based on the observed AM and PM peak hour turning movement volumes at the intersection of Auto Center Drive at the SR-91 Westbound Ramps

and the peak hour-to-daily volume ratio estimated from actual peak hour and daily traffic count data collected throughout the study area. The overall intersection peak hour turning movement volumes were used.

Based on the California Department of Transportation (Caltrans) counts, the SR-91 Westbound Off-Ramp at Auto Center Drive was last counted in 2004. At that time, the ramp carried approximately 6,400 VPD. The relevant Caltrans ramp volume information has been included in Attachment "B".

To maximize the defensibility of the forecasts, each of the existing ramp daily volumes from the latest published Caltrans report has been compared to the draft data included in the Auto Center Drive volume forecasts letter. The following volumes from the Caltrans report are higher than the draft Auto Center Drive volumes:

- Westbound Off-Ramp (6,400 VPD vs. 3,400 VPD);
- Eastbound On-Ramp (8,000 VPD vs. 6,500 VPD);
- Eastbound Off-Ramp (6,600 VPD vs. 6,400 VPD);

It is recommended that the Auto Center Drive existing volumes be revised to reflect the higher volumes as reported by Caltrans.

Item 2

Exhibit E: Project Buildout (2012) Average Daily Traffic Volume (ADT) – (regarding the ADT volumes along Auto Center Drive, between Research Drive/Pomona Road and Wardlow Road) Where did the 200 ADT go?

Response to Item 2

There are intervening driveways along Auto Center Drive between Research Drive/Pomona Road and Wardlow Road, which accounts for the slight difference in daily volume along the roadway segment. However, the daily traffic volumes

Mr. James Faber
LIM & NASCIMENTO ENGINEERING CORP.
July 25, 2007
Page 3

north of Wardlow Road and south of Research Drive / Pomona Road are so similar, it is recommended that only the higher daily volume (16,800 VPD) be presented.

SUMMARY

Urban Crossroads, Inc. is pleased to submit this response to comments letter regarding the Auto Center Drive/BNSF Railroad Grade Separation Traffic Forecast Volumes letter report. Please feel free to contact us at (949) 660-1994 if you wish to discuss any of the items. Once we receive approval of or other City direction regarding the recommended changes, we will update the actual report for submittal to Caltrans.

Respectfully submitted,

URBAN CROSSROADS, INC.



Carleton Waters, P.E.
Principal



Ryan Kelly
Senior Engineer

CW:RK:cg
JN:04224-04 Response to Comments

Attachments

ATTACHMENT "A"

Review and Comment for the Auto Center Drive/BNSF Railroad Grade Separation
Traffic Forecast Volumes Letter Report
Received July 2, 2007
(Linda Abushaban, Senior Engineer)

EXHIBIT A EXISTING AVERAGE DAILY TRAFFIC (ADT)

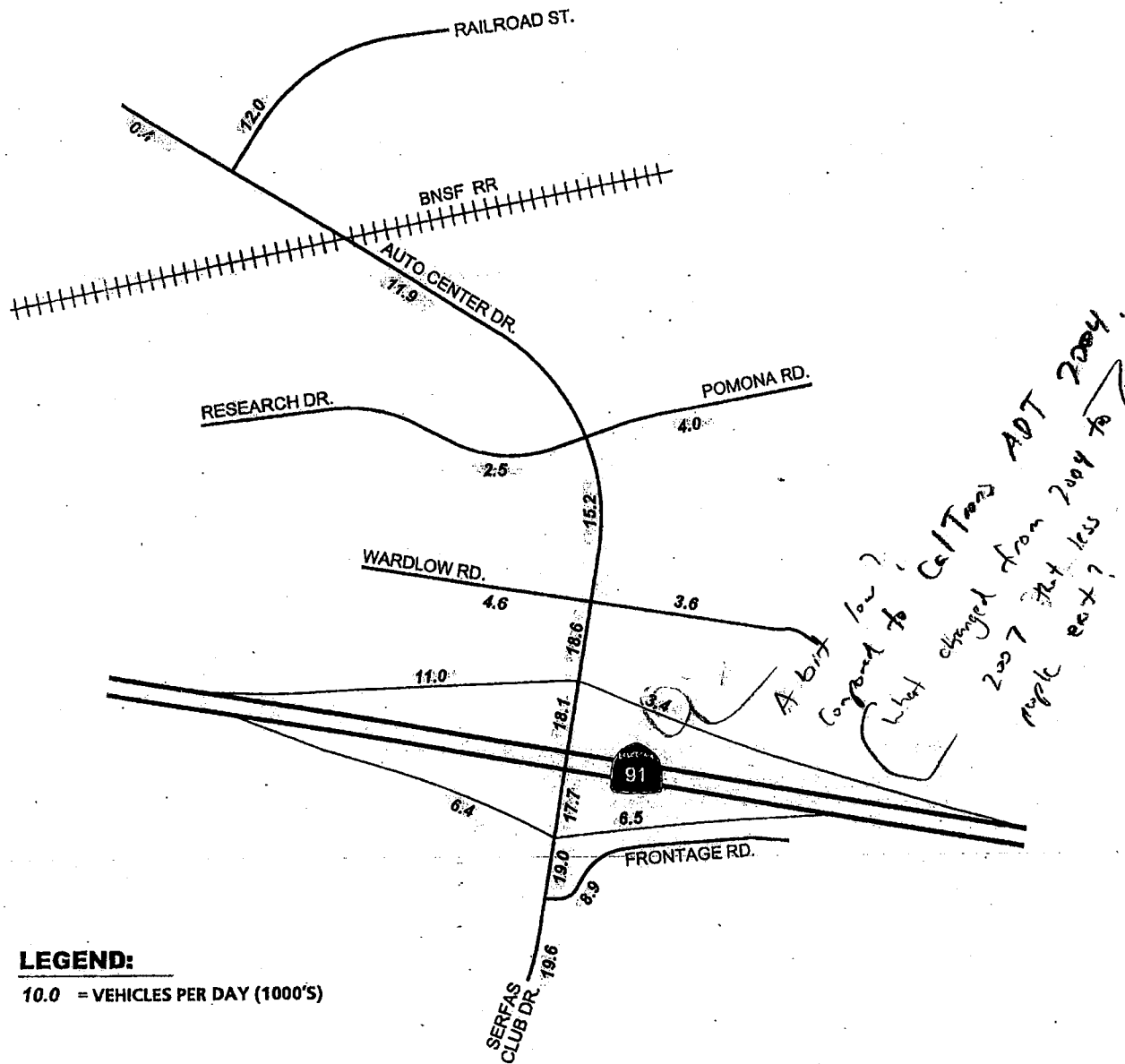


EXHIBIT E



10.0 = VEHICLES PER DAY (1000'S)



ATTACHMENT "B"

Ramp Volumes on the California State Freeway System – District 8 (June 2007)

2006

Ramp Volumes

On the

California State Freeway System

District 8

(Includes Counties: Riverside, San Bernardino)

Compiled by the

Division of Traffic Operations

Of the

State of California

Business, Transportation and Housing Agency

Department of Transportation

Prepared in cooperation with the

U.S. Department of Transportation

Federal Highway Administration

June 2007

Freeway ramp volumes are shown for all the ramps on the freeway system. The ramps are listed by District and in Legislative Route Number order. The volumes shown are those obtained after ramp balancing and rounding. No seasonal or daily adjustment is made. Ramps are not counted every year, but generally every three years.

The description for some ramps includes the abbreviations 'DUM' and 'SEG', which mean 'dummy' and 'segment'.

The 'dummy' entry is actually a duplicate entry. The ramp (or in some instances highway segment) record exists on another intersecting route. The 'dummy' or duplicate record is for a point of volumes change only on the associated route.

The term 'segment' (SEG) is applied to a ramp segment that does not physically and directly touch the freeway route it is assigned to; i.e., there is another ramp which intervenes between the particular ramp 'segment' and the freeway.

Each ramp location is identified by a post mile value approximating a corresponding point on the highway. The post mile values increase from the beginning of a route within a county to the next county line. The post mile values start over again at each county line. Post mile values increase from south to north or west to east depending upon the general direction the route follows within the State.

The post mile at a given location will remain the same year after year. When a section of road is relocated, new post miles (usually noted by an alphabetical prefix such as "R" or "M") are established for it. If relocation results in a change in length, "post mile equations" are introduced at the end of each relocated portion so that post miles on the remainder of the route within the county will remain unchanged. Post mile equations are not shown on the report.

Ramps without an ADT in the last ten years will not be published.

06/12/2007

13:09:02

CALTRANS TRAFFIC VOLUMES

PRINT FILE FOR RAMP AADT

Page # 52

08-RIV-091

P POST P MILE	P S DESCRIPTION	1997 ADT	1998 ADT	1999 ADT	2000 ADT	2001 ADT	2002 ADT	2003 ADT	2004 ADT	2005 ADT	2006 ADT
R 000.889	EB OFF TO GREEN RIVER		7550						12000		
R 000.906	WB ON FR GREEN RIV DR		7650			8700			9400		
R 001.137	WB OFF TO GREEN RIVER		3500			3400			3900		
R 001.167	EB ON FR GREEN RIV DR		3300			3400			3600		
R 001.956	WB ON FR SB RTE 71		8400						12000		
R 002.220	EB OFF TO NB RTE 71		8400			12300			12500		
R 002.236	WB OFF TO NB RTE 71		6700			13000			14000		
R 002.573	EB ON FR SB RTE 71		8100			9900			13000		
R 003.549	WB ON FRM SERFAS CLB DR		5250			7100			6600		
R 003.577	EB OFF TO SERFAS CLB DR		4750			6600			6600		
R 003.824	EB ON FRM SERFAS CLB DR		6600			6000			8000		
R 003.933	WB OFF TO SERFAS CLB DR		5450			5500			6400		
R 004.088	EB OFF TO MAPLE		10700			11400			11000		
004.088	EB OFF TO MAPLE ST								11000		
004.191	WB ON FRM MAPLE ST		8800			10000			10600		
004.247	EB ON FR MAPLE/6TH STS		6550						6200		
004.332	WB OFF TO MAPLE		5700			4800			6000		
005.250	WB ON FRM LINCOLN AVE								8800		
005.251	WB ON FR LINCOLN AVE		6500			7400			8800		
005.374	EB OFF TO LINCOLN		5800			6000			7200		
005.393	WB OFF TO LINCOLN AVE								12000		
005.394	WB OFF TO LINCOLN		10500			11300			12000		



May 3, 2007

Mr. James Faber
LIM & NASCIMENTO ENGINEERING CORP.
1887 Business Center Drive
2nd Floor, Suite 6
San Bernardino, CA 92408

**Subject: Auto Center Drive/BNSF Railroad Grade Separation Traffic Forecast
Volumes Letter Report**

Dear Mr. Faber:

Introduction

The firm of Urban Crossroads, Inc. is pleased to submit this Traffic Forecast Volumes Letter Report as an interim report for the Auto Center Drive/BNSF Railroad Grade Separation Project Traffic Impact Study.

The 2007 existing daily and peak hour traffic volumes, the refined 2032 long range design year daily and peak hour traffic volumes and the refined 2012 project buildout daily and peak hour traffic volumes are represented on exhibits with this letter report. The methodology and procedures used to develop the future traffic volumes are also described.

Existing Traffic Volumes

Existing traffic counts were used for the traffic volumes forecast process. Exhibit A illustrates the existing average daily traffic for the study area arterial roadways while Exhibit B and Exhibit C illustrate the existing AM and PM peak hour intersection traffic volumes, respectively. Exhibit D illustrates the existing roadway geometry conditions including existing number of through lanes and the intersection controls.

The existing ADT volumes are based upon actual 24 hour daily volume counts (Attachment "A") and/or the peak hour turning movement traffic data collected by Urban Crossroads, Inc. using the following formula for each intersection leg:

$$\frac{[AM \text{ (Approach + Exit Volume)} + PM \text{ Peak Hour (Approach + Exit Volume)}]}{(0.068 + 0.087)} = \text{Daily Leg Volume}$$

In the above formula, the constants of 6.8% and 8.7% are calculated AM and PM Peak Hour to ADT ratios based on the actual peak hour and daily traffic count data collected and included in Attachment "A".

As indicated on Exhibit A, existing daily traffic volumes on Auto Center Drive range from 19,600 to 400 vehicles per day (VPD) with the highest daily traffic volumes occur on Auto Center Drive, south of Frontage Road (19,600 VPD) while the lowest occur on Auto Center Drive, north of Railroad Road (400 VPD). The ADT on Auto Center Drive nearby the BNSF Railroad is about 12,000 VPD.

The AM peak hour traffic volumes were determined by counting the two hour period between 7 - 9 am in the morning. Similarly, the PM peak hour traffic volumes were identified by counting the two hour period from 4 - 6 pm in the evening. Peak period traffic count worksheets are included in Appendix "A". The count includes the vehicle classification as shown below:

- passenger cars (1 PCE)
- buses/recreational vehicles (1.5 PCE)
- 3 axles (2 PCE)
- 4 or more axles (3 PCE)

The overall existing count volumes illustrated on the exhibits and will be used for the analysis for the study are calculated passenger car equivalent (PCE) volumes. The PCE factor for each classification is shown on the list above. The calculated PCE volumes are

also included in Attachment "A". Explicit peak hour factors have been calculated using the data collected for this effort as well.

Raw Model Data Review

The long range design year (2032) traffic forecast volumes for the study area were prepared based on the traffic model data provided by Meyer, Mohaddes Associates (MMA). The project buildout (2012) traffic forecast volumes were generated by interpolating the volumes between the existing (2007) and the long range (2032).

The memo provided by MMA (included in Attachment "B") describes the modeling methodology for developing City of Corona buildout traffic forecasts. The raw link volumes growth (between 2002 and 2025 inbound and outbound) for the study intersections were provided in a tabulated format within the memo. The raw model ADT for three roadway segments are also provided in tabulated format. No raw model plot has been obtained from MMA. As indicated in the memo, the model represents the City of Corona General Plan Travel Demand Model with RTP Projects and Riverside County-Orange County Connection. It was also noted that no data were provided for the intersection legs which are not included in the traffic model. Those study intersections legs are:

- All legs, Intersection of Auto Center Drive at Wardlow Road
- North leg, Intersection of Auto Center Drive at Railroad Street
- West leg, Intersection of Auto Center Drive at Pomona Road

Raw Model Data Refinement Process

As indicated in the memo, the City of Corona General Plan Travel Demand Model has an adjusted base (validation) year of 2002 and a horizon (future forecast) year of 2025. Per MMA modeling staff, no separate truck model is available. The model growth documented in the memo represents the PCE traffic volume growth. The difference in model volumes

(2025 – 2002) defines the growth in traffic over the 23 year period. Since the existing conditions traffic count data was collected in 2007 and our initial forecasting year is 2030, the overall model growth was adjusted to reflect only the growth from 2007 to 2030 (23 years as well). A factor of 1.0 (23 / 23) has therefore been applied to the overall model growth to determine the incremental growth that was added to the existing count data to determine the refined 2030 roadway segment daily and peak hour approach and departure traffic volumes. An annual growth of 3% for two years (6% total) has then been applied to the 2030 volumes in order to estimate the final 2032 long range design year traffic volumes.

The future peak hour approach and departure volumes obtained from the above calculations are then entered into a spreadsheet program consistent with the National Cooperative Highway Research Program (NCHRP Report 255), along with the existing turning movement volumes. A linear programming algorithm is used to calculate individual turning movements which match the known directional roadway segment forecast volumes computed in the previous step. This program computes a likely set of intersection turning movements from intersection approach counts and the initial turning proportions from each approach leg.

For the unknown intersection legs, an average growth rate of 100% was calculated based on the other known intersection leg model growth was used to apply to the 2007 traffic count in order to obtain the initial 2030 volumes. Minor adjustments have been conducted to ensure the intersection inbound and outbound volumes are balanced for each intersection. As the final step of the process, flow conservation check and manual forecast adjustments were performed to ensure the final long range design year (2032) traffic volume forecasts are reasonable. A minimum 10% growth from 2007 to 2032 has been applied (if necessary) for all intersection turning movement volumes. Attachment "C" includes the 2032 traffic volume post processing worksheets for both ADT and intersection peak hour turning movement volumes.

The final project buildout (2012) traffic volumes are interpolated between the 2007 and the final long range 2032 traffic volumes. No cumulative projects are available in the study area per discussions with City staff. Attachment "D" includes the 2012 traffic volume post processing worksheets for both ADT and intersection peak hour turning movement volumes.

Final Project Buildout (2012) Traffic Volumes

Exhibit E illustrates the 2012 Project Buildout Average Daily Traffic while Exhibit F and Exhibit G illustrate the 2012 AM and PM peak hour intersection traffic volumes, respectively.

As illustrated, the highest ADT will occur along Auto Center Drive, south of Frontage Road with about 20,400 VPD under 2012 conditions. Auto Center Drive at Railroad Street will be realigned to serve the dominate traffic flow from Auto Center Drive to Railroad Street as a through movement. The north leg of Auto Center Drive will become a minor street. The realignment design is part of the grade separation project based on the conceptual design plan provided by LAN Engineering, Inc.

Final Long Range (2032) Traffic Volumes

Exhibit H illustrates the refined 2032 Long Range Average Daily Traffic while Exhibit I and Exhibit J illustrate the 2032 AM and PM peak hour intersection traffic volumes, respectively.

As illustrated, the highest ADT will occur along Auto Center Drive, between Wardlow Road and the SR-91 Freeway Westbound Ramps with about 25,200 VPD under 2032 conditions. Based on the initial review of the traffic volumes, the critical intersections with high turning movement volumes are:

- Auto Center Drive at SR-91 Freeway Westbound Ramps
- Auto Center Drive at SR-91 Freeway Eastbound Ramps
- Auto Center Drive at Frontage Road

For the intersection of Auto Center Drive at SR-91 Freeway Westbound Ramps, the critical turning volumes are 936 northbound left turn volumes and 1,337 southbound right turn volumes during the AM peak hour. The critical volumes at the intersection of Auto Center Drive at SR-91 Freeway Eastbound Ramps are 632 eastbound left turn volumes during the PM peak hour and 506 during the AM peak hour for the same movement. For the intersection of Auto Center Drive at Frontage Road, the critical volumes are 748 northbound right turn volumes and 500 southbound left turn volumes during the PM peak hour.

This initial volume review suggests that the most critical intersection is the intersection of Auto Center Drive at the SR-91 Freeway Eastbound Ramps. The conflicting movements during the AM peak hour exceed the potential conflicting movements at any other intersection, and the intersection is further constrained by adjacent development and the SR-91 Freeway overpass structure. Therefore, preliminary traffic operations analysis has also been conducted by Urban Crossroads, Inc. prior to submitting this work product.

The results of the preliminary analysis indicate that the southbound approach will require an additional approach lane to provide a configuration consisting of two right turn lanes and an exclusive through lane. The northbound approach will require an additional (second) northbound left turn lane. If these improvements are consistent with the expectations of the project team, then the traffic volume forecasts represent an appropriate basis for completing the project traffic analysis. Otherwise, team discussion and further refinement may be necessary.

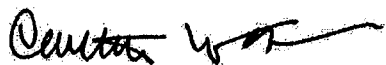
Mr. James Faber
LIM & NASCIMENTO ENGINEERING CORP.
May 3, 2007
Page 7

Closing

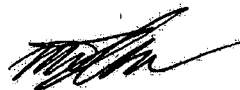
Urban Crossroads, Inc. will proceed with the traffic operational analysis for the project based on the forecast traffic volumes documented in this report. Your prompt response to this interim report is critical in order for us to move forward with the analysis tasks. Please feel free to contact us at (949) 660-1994 if you have any questions or concerns about this letter report.

Respectfully submitted,

URBAN CROSSROADS, INC.



Carleton Waters, P.E.
Principal

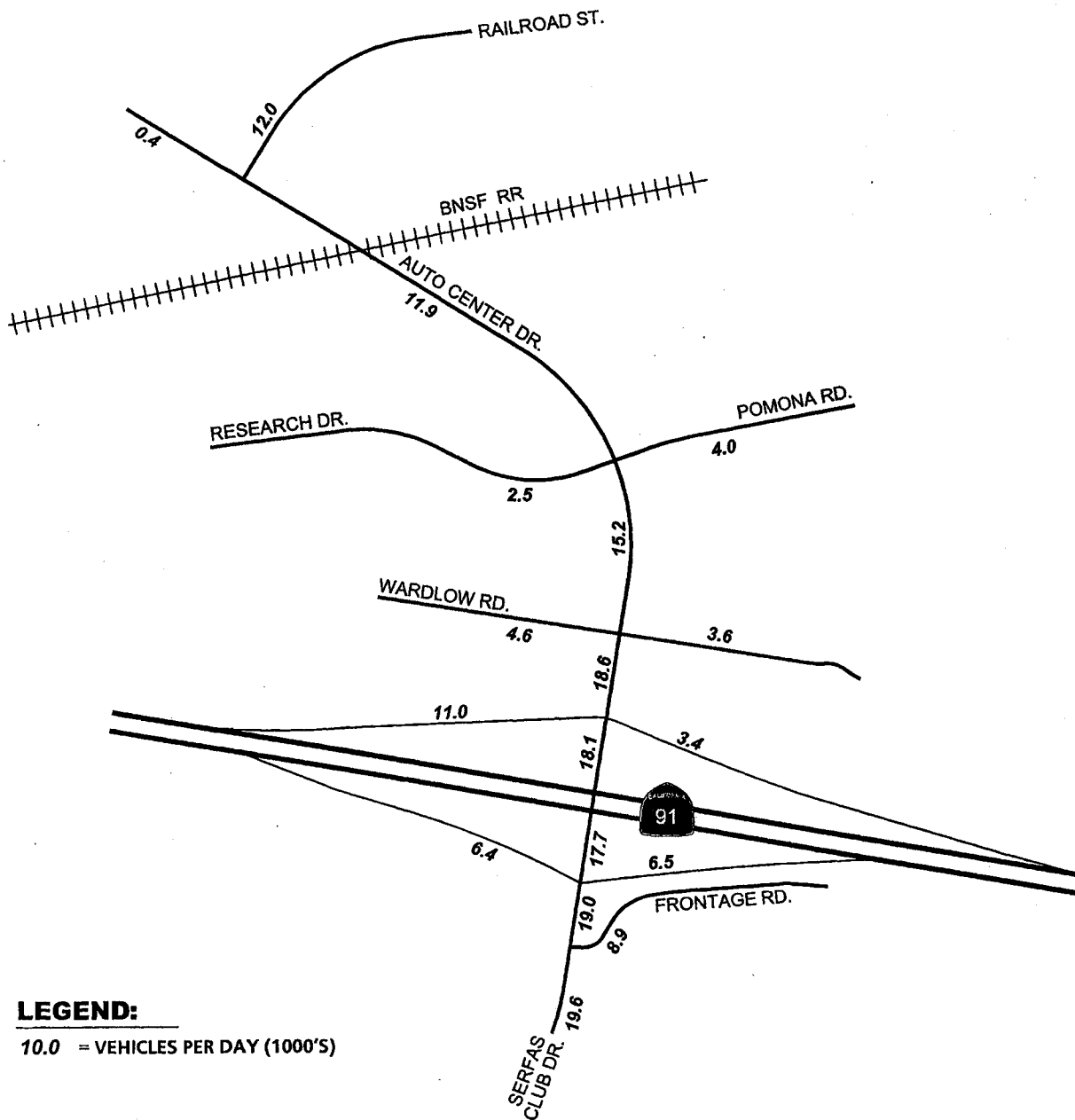


Min Zhou, P.E.
Associate

CW:MZ:cg
JN:04224-03

Attachments

EXHIBIT A **EXISTING AVERAGE DAILY TRAFFIC (ADT)**



LEGEND:

10.0 = VEHICLES PER DAY (1000'S)



EXHIBIT B EXISTING AM PEAK HOUR TRAFFIC VOLUME

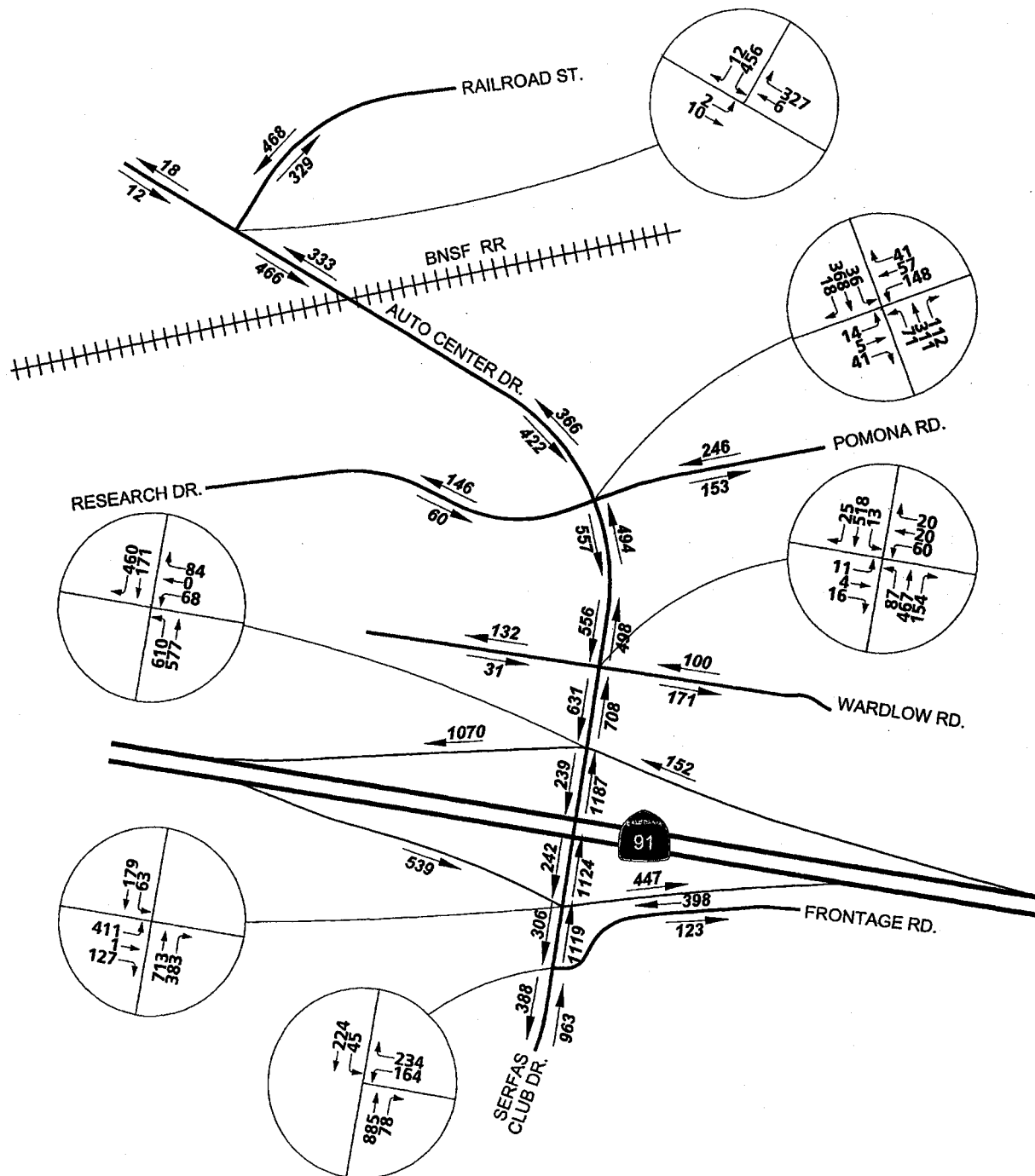


EXHIBIT C EXISTING PM PEAK HOUR TRAFFIC VOLUME

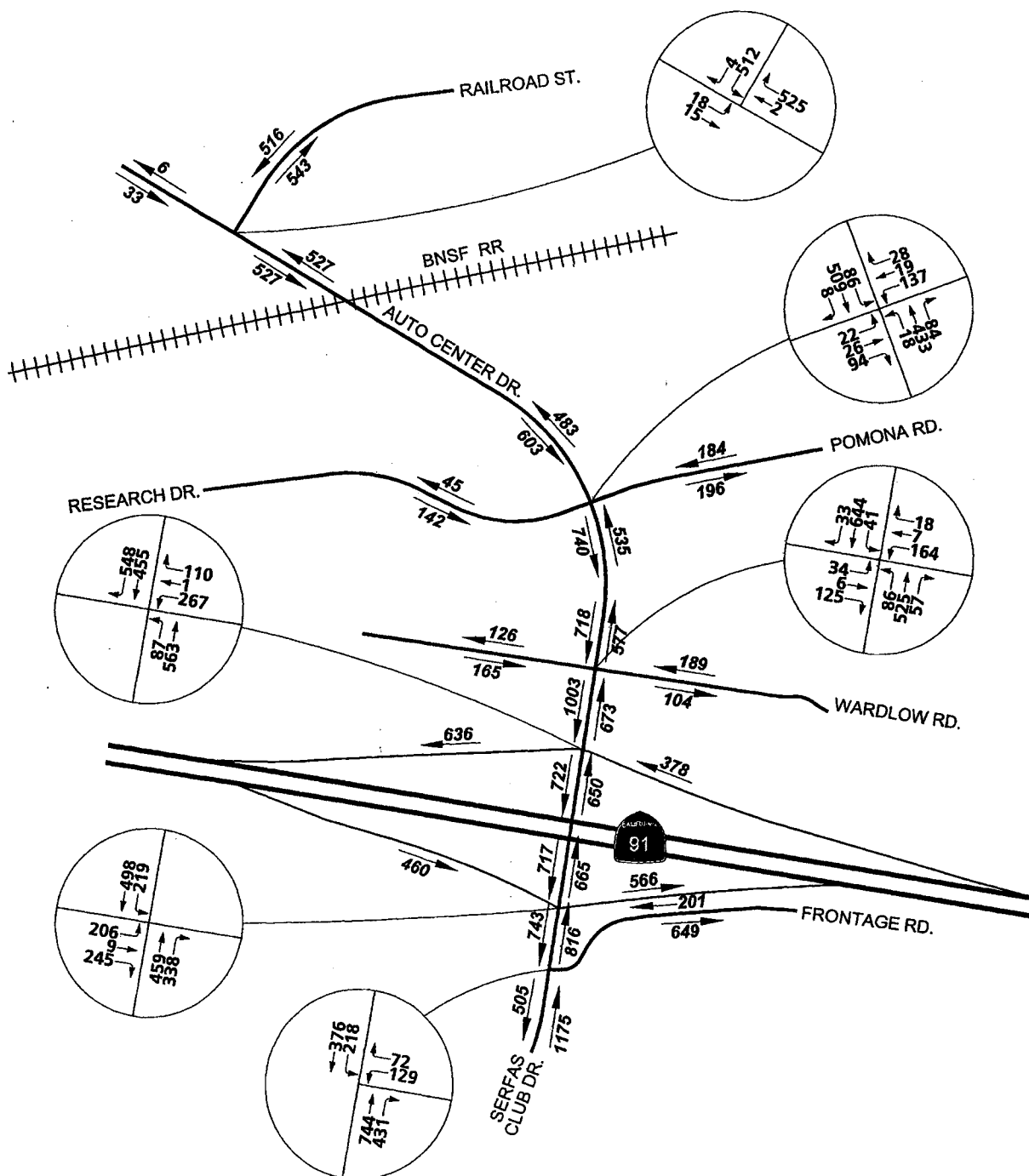
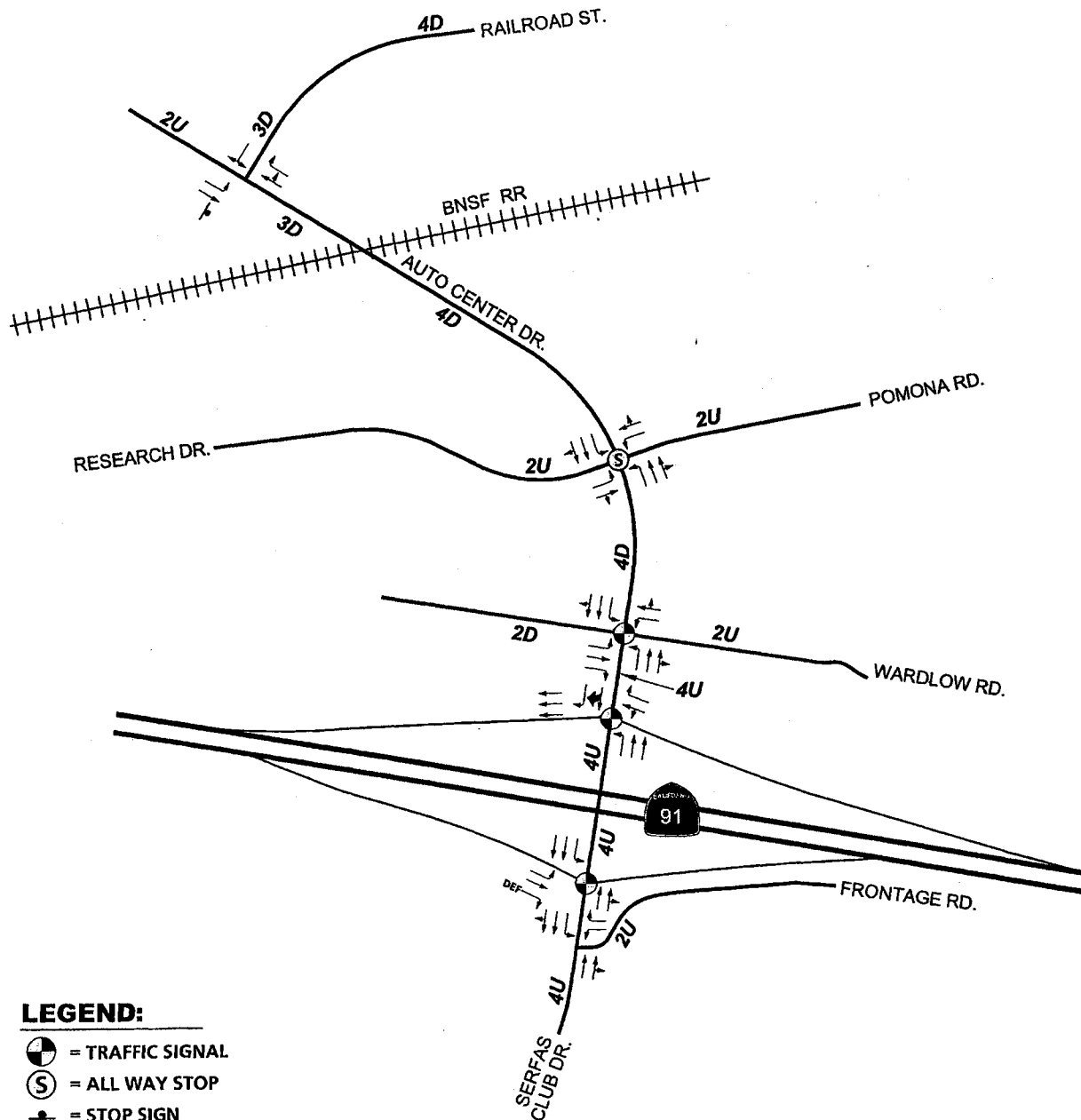


EXHIBIT D EXISTING NUMBER OF THROUGH LANES AND INTERSECTION CONTROLS



LEGEND:


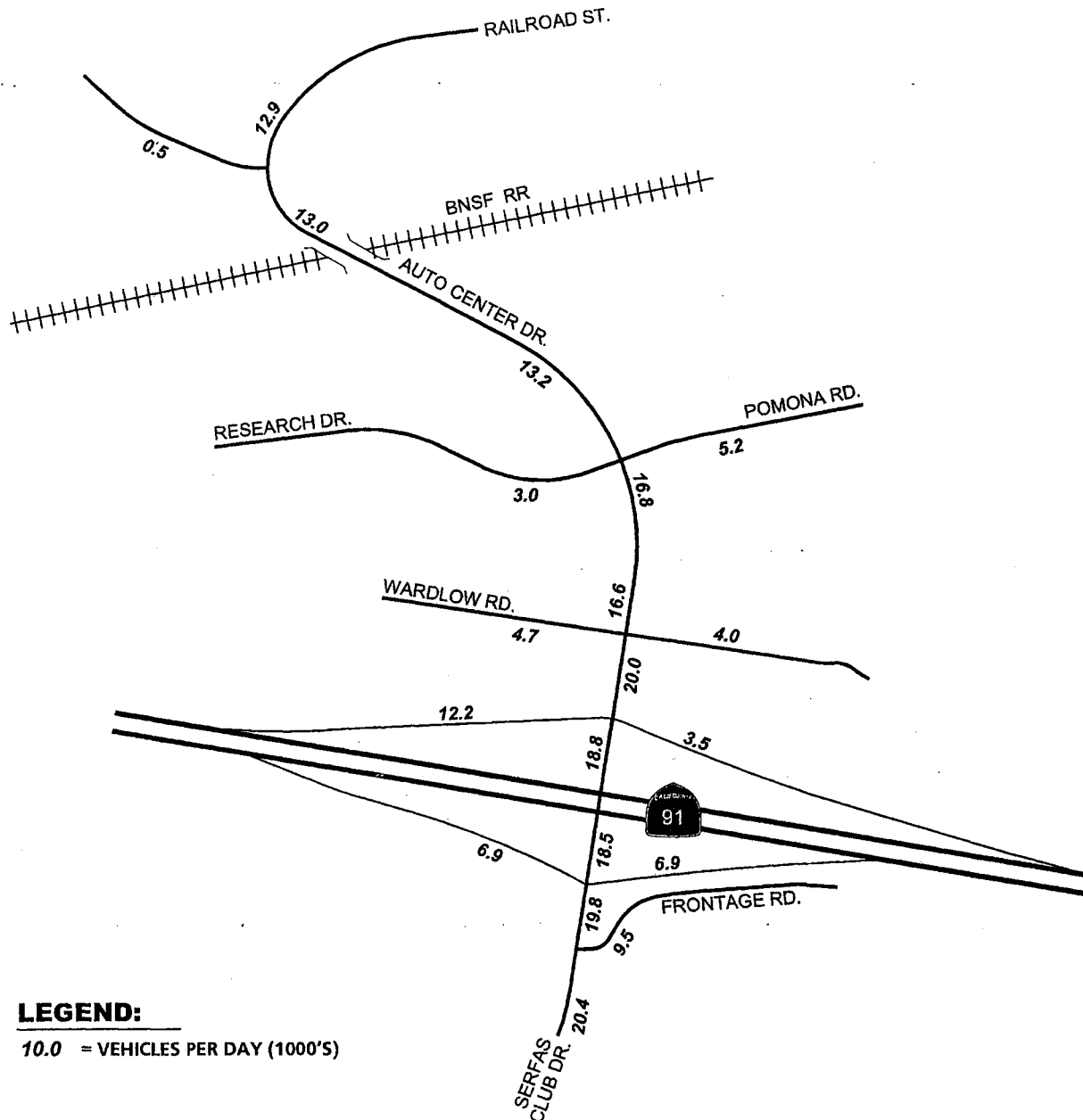
-  = TRAFFIC SIGNAL
-  = ALL WAY STOP
-  = STOP SIGN
- 4** = NUMBER OF LANES
- D** = DIVIDED
- U** = UNDIVIDED
-  = DEFACTO RIGHT TURN LANE
-  = CARPOOL VEHICLES ONLY



EXHIBIT E PROJECT BUILDOUT (2012) AVERAGE DAILY TRAFFIC VOLUME (ADT)



LEGEND:

10.0 = VEHICLES PER DAY (1000'S)



EXHIBIT F PROJECT BUILDOUT (2012)AM PEAK HOUR TRAFFIC VOLUME

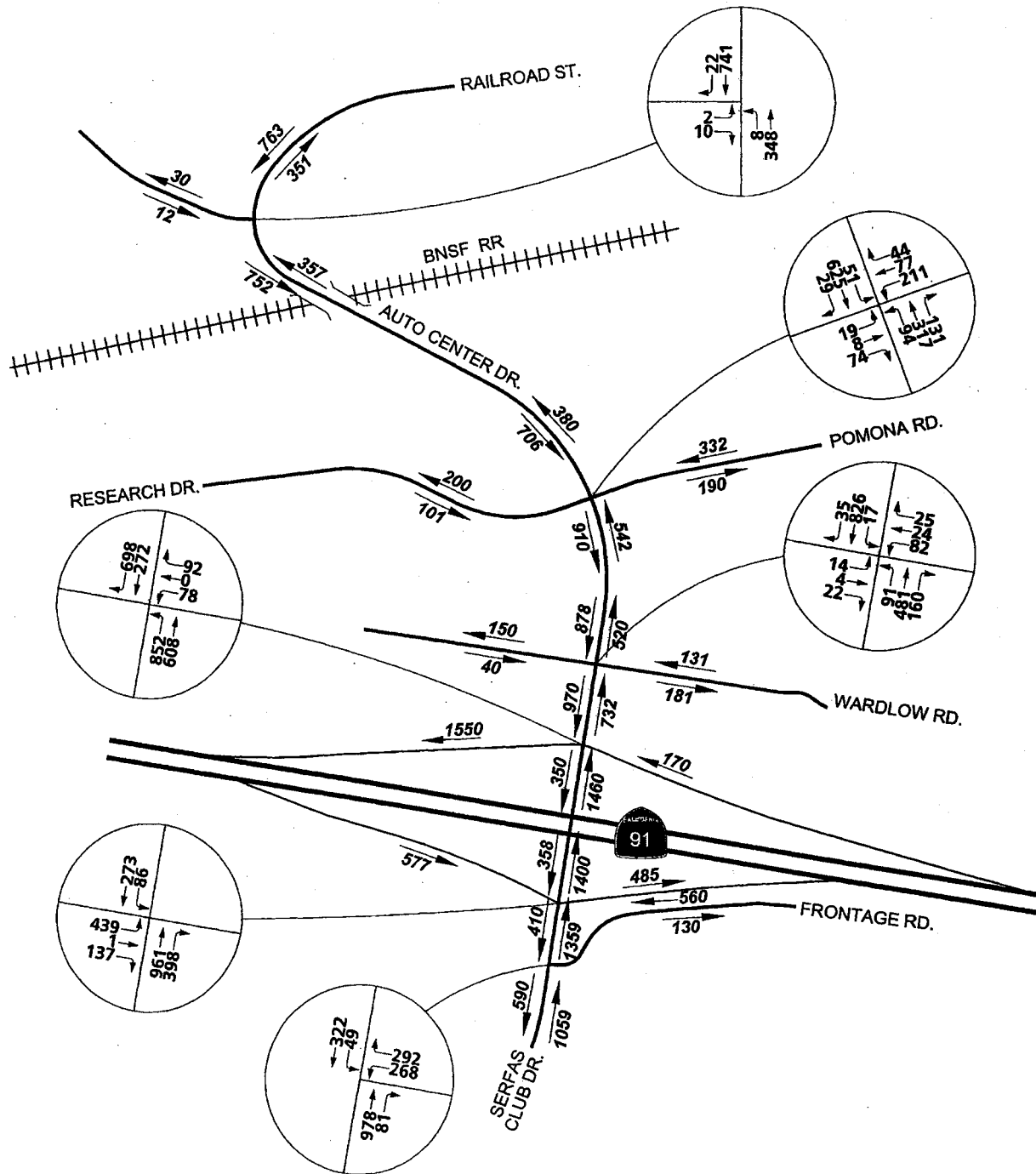


EXHIBIT G
PROJECT BUILDOUT (2012)
PM PEAK HOUR TRAFFIC VOLUME

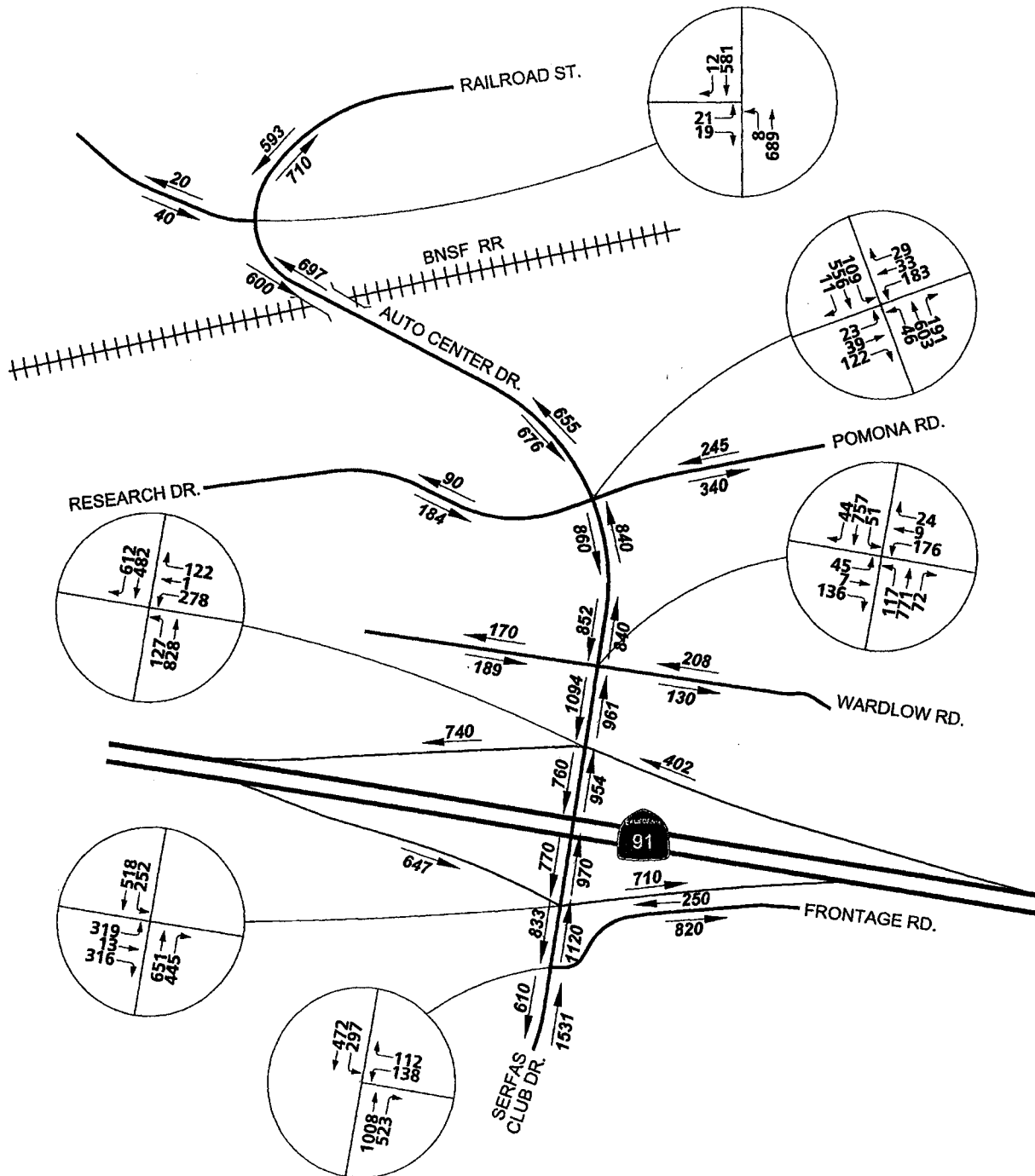


EXHIBIT H

LONG RANGE (2032) AVERAGE DAILY TRAFFIC VOLUME (ADT)

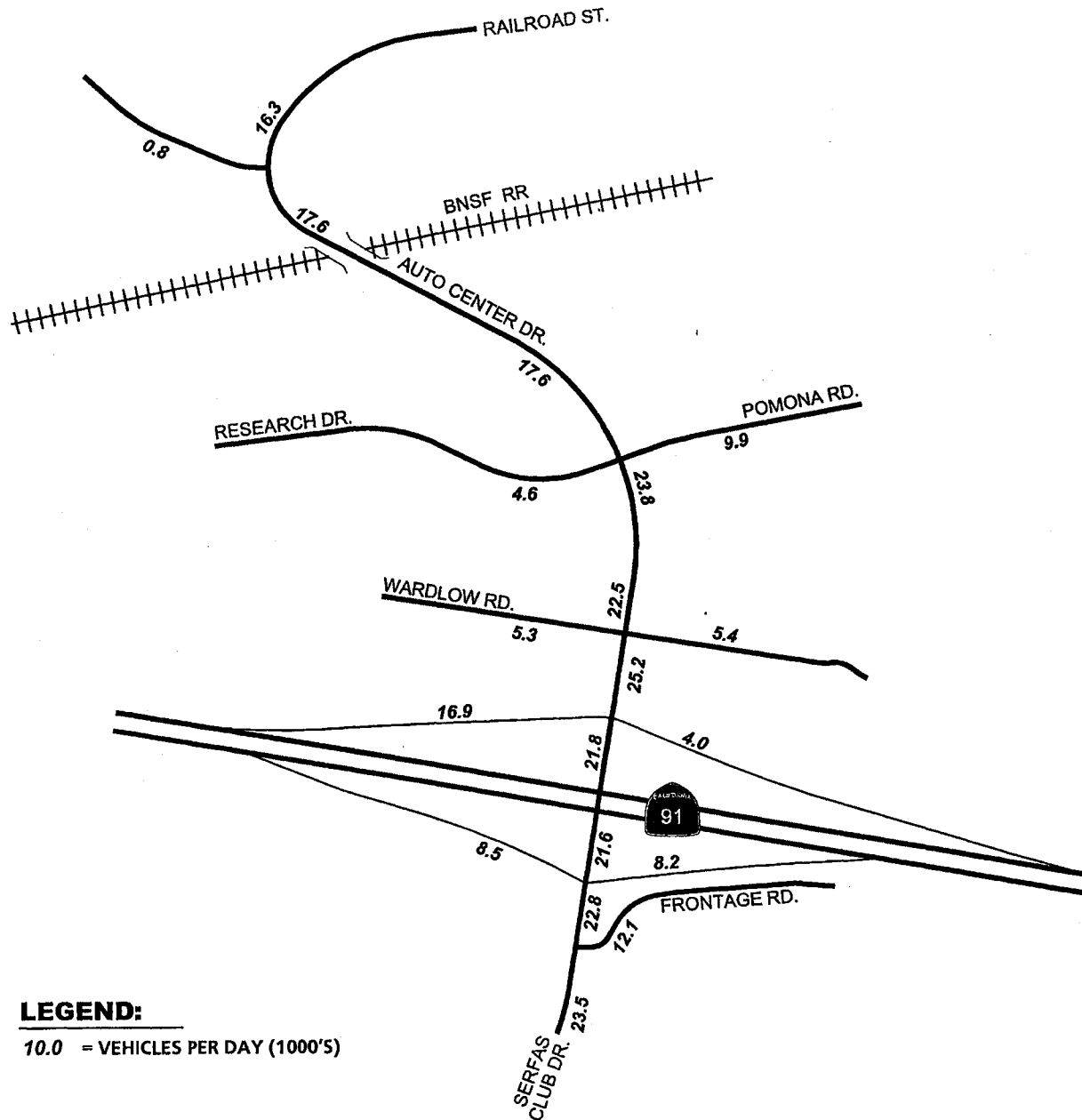


EXHIBIT I LONG RANGE (2032) AM PEAK HOUR TRAFFIC VOLUME

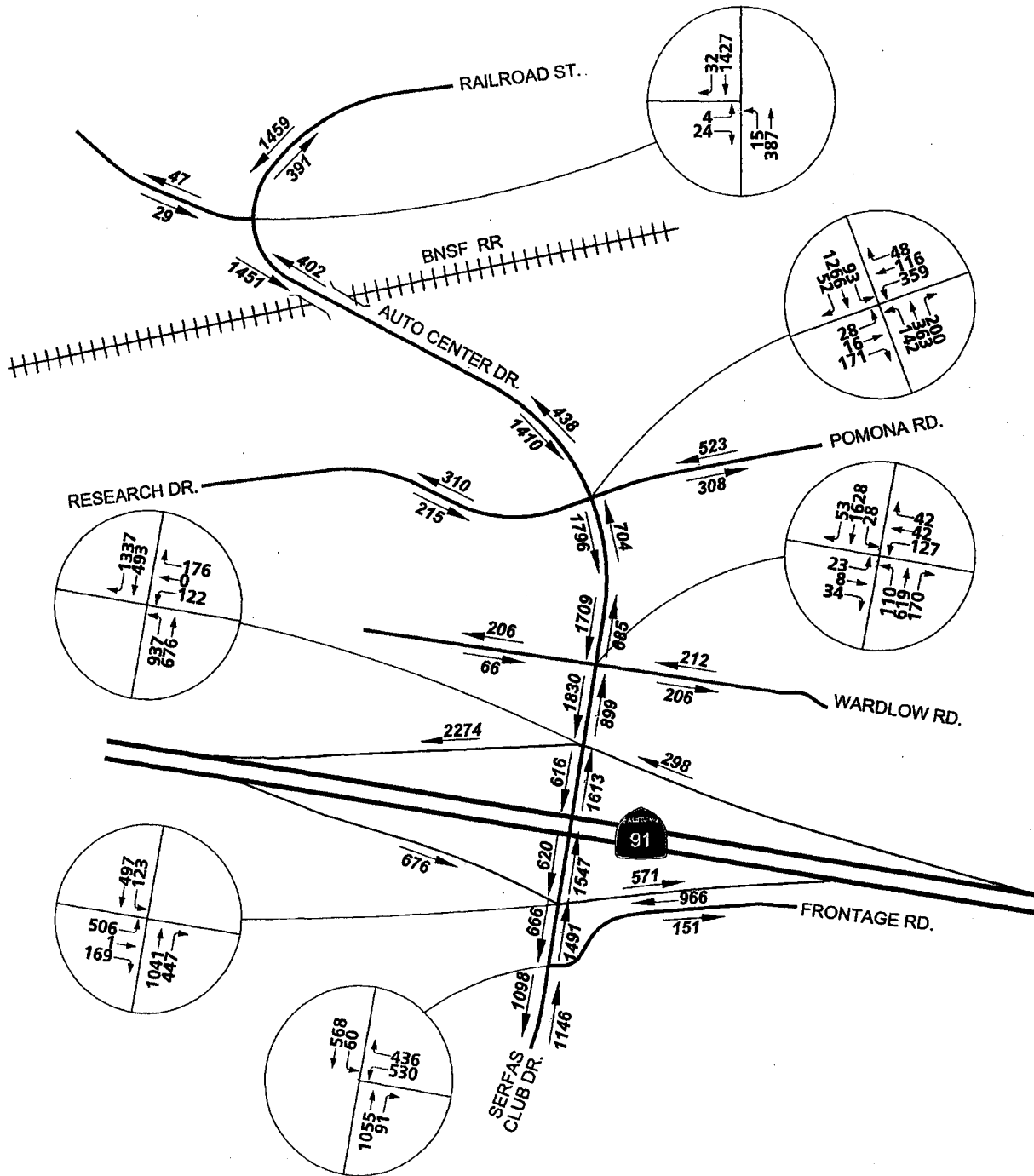


EXHIBIT J
LONG RANGE (2032)
PM PEAK HOUR TRAFFIC VOLUME

